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ART. I. *Remarks on reöpening the trade with the Southern Archipelago, describing the character and situation of those nations, and the advantages which a trade with them will yield to the people and government of China.* By Luhchow of Fuhkeën.

ALL the inhabitants of the Southern Archipelago are harmless; every prohibition, therefore, ought to be removed, and our people allowed to trade freely with them. By adopting this course, the superabundant products of foreign countries will supply the deficiencies of our own. Why then delay its adoption for a single moment? The lieut.-governor of Fuhkeën, some time ago, sent up a secret memorial to the emperor, intimating that the merchants trading by sea, will sell their ships to foreigners to be employed in exporting rice, and thus bring calamity on our country, or that they will be employed as piratical vessels; he therefore requested that they might be prohibited from going to sea, in order to prevent such consequences. Vague and scholastic thoughts, contracted like the vision of one gazing at the heavens from the bottom of a well! Self-named guardian of the country, he intrudes his specious words on the notice of our sovereign. And his sacred majesty, deeply solicitous for the welfare of the country, and fearing lest there might be some truth in the representations, laid the subject before his ministers and people; for, being in doubt as to the reality of what had been represented in the memorial, he wished to find some one, fully acquainted with the subject, who could give him satisfactory information. But ministers, having never been abroad, possessed no such knowledge, while none of the people dared to approach their sovereign. In this way the whole subject, from first to last, remained unexplained; and hence originated the embargo on foreign commerce. It was not desired by his sacred majesty.

Now, those who are acquainted with maritime affairs, are able to show who and what are hurtful, and the reverse. Of all foreign nations—numerous as the stars of heaven, and spread out like the men

on a chess-board — Corea is the nearest to our capital; and its inhabitants conform to our rights and laws. The most powerful nation on the east is Japan, beyond which there are no others. A little below Japan, are the islands of Lewchew, large and small, scattered over a space of five or six hundred miles. Further east, through the wide expanse of waters, no other nations are to be found. Of the numerous tribes inhabiting the Southern Archipelago, those of Luçonia and Java are the most powerful. Those of Borneo, Malacca, Sumatra, and scores of other places, are weak and unimportant, and can never entertain any hostile intentions. Cochinchina and Tsiompa are almost conterminous with the provinces of Kwangtung and Kwangse. Kamboja, Ligore, Patáni, and many other places, with Siam, are in the extreme southwest. On the west are the Europeans, a very strong and ferocious people, with whom no other foreigners are comparable. 'Europeans' is the general appellation of all the inhabitants of the western islands; and among these the English, the Spanish, the French, the Hollanders, the Portuguese (both in Europe and at Goa), are the most cruel and ferocious. They have strong ships, and do not fear the furious winds. Their guns, and other weapons, are superior to those of our country. In their dispositions, too, they are artful and subtle; they spy out every new place, and form designs of acquiring territory.

The Europeans, the Roman Catholics, and the Japanese, are more to be dreaded than any other foreigners. Java originally belonged to the Malays; but the Europeans having opened a trade there, got possession of the country, and hence it became a rendezvous for their ships. Luçonia, also, originally belonged to the Malays; but the Roman Catholics having introduced their religion, took possession of the country, and it became the emporium of their ships. In the reign of the Ming dynasty, the Japanese became turbulent, and greatly annoyed the people of Kwangtung, Fuhkeën, Chĕkeäng, and Keängsoo; and to this day even the mentioning the name of the Japanese marauders fills them with fearful apprehensions. But from time immemorial, the inhabitants of the Southern Archipelago have never excited the slightest degree of alarm on our southern borders, having been engaged solely in commercial affairs and in an interchange of the necessaries of life.

At the present time, commerce with the Japanese is not interdicted; nor is that with the Europeans; and the Roman Catholics are spread throughout the empire, and at Macao in the province of Canton they even have a permanent settlement. Shall, then, only the weak and inoffensive inhabitants of the Southern Archipelago — with whom a lucrative trade may be carried on, unattended by any evil consequences — shall these only be interdicted? The population of Fuhkeën and Kwangtung is dense; but the land fit for agriculture is limited, and, not yielding sufficient supplies for the inhabitants, five or six tenths of them seek a livelihood in foreign commerce. Our own productions which have no importance or value at home, when exported become equal to precious gems. In the maritime provinces,

various manufactures, not excepting even the needle work of our wives and daughters, which were annually exported, brought in return hundreds of thousands of silver and merchandise. The importance of such a commerce is not small.

Before the embargo was laid on the trade with the Southern Archipelago, the people of Fuhkeën had abundant supplies. And even those whose hands were idle, being out of employment, stimulated by a desire of acquiring riches, were induced to go abroad. Few then were found at home in want of food and clothing; and few were the evils which were occasioned by thefts and robberies. But since the embargo was laid on, the interchange of every kind of merchandise has ceased; the people are daily more and more embarrassed; and those who were employed in the useful arts, have to lament that they can find no demand for their work; while the merchants concerned in the foreign trade, sigh because no outlet is found for their traffic. Ships, built for the foreign service at an expense of four or five thousand dollars, are dismantled and made fast to the desolate beach, there to rot and be eaten by worms. They are too large for the domestic trade; and if offered for sale there is no one to purchase them. To break them up in order to build small vessels, would be like hewing down a spar to make a block, or like tearing to threads whole pieces of embroidered work to make patches. It is painful to contemplate this condition of our commerce. Still there is hope that a brighter day will arise and the clouds be dispelled, when perchance the restrictions will be removed, and commerce revived. But the damage which must be sustained by destroying even a single vessel, will blight the prospects of many families. Such calamities are affecting and distressing beyond expression. On account of the embargo on our foreign commerce multitudes of the inhabitants along the sea-board are idle and unemployed. Those who are thoroughly acquainted with the seas, and experienced in the business of navigation, being unable to act as porters and bearers of burdens even so as to gain a temporary sustenance, are in danger of being forced to become pirates in order to obtain their daily food. The idle and unemployed are in still greater danger, and may go off in piratical bands to Formosa, or break out in open rebellion. A remarkable case of this kind occurred in 1661, when a band of insurgents on Formosa were led on by Chin Fuhchow.

Whatever will benefit both the people and the government, even though it be in a small degree, ought not to be neglected. On the other hand, whatever is injurious alike to both, even though it be in the smallest possible degree, should be removed. Now, the embargo on our southern commerce has injurious effects, while it is unattended by any advantages. For it makes the rich, among those who live on the sea-board, poor; and the poor, idle. It forces the mechanic and the merchant out of their employments: and those who are unemployed, it compels to become pirates. Fuhkeën, having no silver mines, is entirely dependent on the foreign coin, which, if the embargo is long continued, will at length cease, and it will become necessary to have

recourse to a paper currency to supply the deficiency. Such evils are by no means to be disregarded. On the other hand, to open the trade with the Southern Archipelago will afford advantages, without giving rise to any evils. For then a lucrative interchange of commodities will be carried on abroad, while at home the existing calamities will gradually be removed. Our vast population will then have the means of supplying all the wants of life, and the amount of duties at the custom-houses will be increased. In this way the abundant products of the people will enrich the government. Surely, then, these advantages will not be inconsiderable.

As to what has been said about the ships engaged in this trade being sold to foreigners for the purpose of exporting rice, or being taken and employed as piratical vessels, it may be remarked, that hitherto nothing of the like has ever occurred. The largest of the ships engaged in foreign commerce cost seven or eight thousand dollars; the smallest cost two or three thousand. These ships, therefore, could not be sold for any very small sum. When merchants expend their property in building a vessel, it is with the hope that the money so invested will prove lucrative during many generations. And, if at any time they become tired of going to sea themselves, it is easy to charter them at a high rate. Who, then, would be willing to sell his ship? Besides, the foreign timber, is so much more substantial than ours, that it is always sought by our merchants for shipbuilding. For example, a spar for a mast, which abroad would not cost more than one or two hundred taels, at home costs more than three times that sum. The ships built by foreigners are also more strong than ours. When we use boards a few inches in width, they use whole timbers. And where our fastenings are a few inches, theirs are more than a foot long. Indeed, they would not accept one of our vessels as a present were it offered to them. How much less would they think of purchasing one at a high price!

In the provinces of Fuhkeën and Kwangtung, the rice is not abundant. In the former province the deficiency is very great, and nearly one half of the annual consumption is brought from Formosa, or from the neighboring provinces of Keängsoo and Chĕkeäng. Previous to the embargo on our commerce with the Southern Archipelago, rice was constantly brought from Luçonia to Amoy. Our importations from abroad were of no inconsiderable amount; while foreigners have in no instance been dependent upon us for a livelihood. And the merchants, who are engaged in foreign trade, are men of property and respectability; how could they ever think of entangling themselves in the net of the law? The space occupied in one of their ships with a pecul of goods yields them a freight of four or five taels, which is far above the value of the rice required to fill the same space. Surely, then, no one can be so foolish as to disregard all profits, merely for the sake of transgressing the laws.

Nor have these vessels ever been taken and employed for piratical purposes. Those engaged in that traffic are mere coasters, which ply among the islands near the shore, seldom venturing out to sea

more than eighty or a hundred miles. With their small craft the pirates can have no object in going out further than this. Besides, they would dread the strong gales, since they would have no place in which to take shelter. But the merchantmen, employed in the foreign trade, being very large, go straight out to sea thousands of miles, where no piratical vessel would venture to follow them, fearlessly encountering the winds and waves. If the pirates are prepared to commit depredations on the coast, there are many smaller merchant-vessels, belonging to Chĕkeäng and Kwangtung, which they might easily capture. Why, then, seek to encounter the ships engaged in the foreign trade? And should one, in any case, chance to do so, the piratical vessel would find herself so inferior in size, that ladders would be required to board her; and in the piratical vessel the number of men does not exceed twenty or thirty; in the other, the number is never less than a hundred. It is useless to talk of their joining battle against such odds. The merchantman, getting to windward, might at once run down and sink the pirate. Where, then, is there any cause to fear that these vessels will be captured and employed for piratical purposes?

At the present time our august sovereign, sitting securely on his throne, beholds all nations reposing in tranquility, and all who have the breath of life dwelling together as one family. And is it only with the weak and submissive inhabitants of the Southern Archipelago that the prohibitions are to forbid our intercourse? If any minister, whether in the capital or in the provinces, is aware of these things, and fails to represent the case, where is his fidelity to his sovereign? His love to his country? His tender solicitude for those who come from afar? His regard for those about him? Or how does he seek to provide for the people of his own country? Though rude and unlearned, I deeply lament such a state of affairs as I have here portrayed.

Note. The preceding paper was written in 1724, the second year of the reign of Yungching. The embargo was repealed in 1727. The phrase 'allowed to trade freely' might be translated 'allowed a free trade;' and of such a trade Luhchow seems to have been the advocate, as multitudes of his countrymen now are. In his enumeration of the names of foreign countries, the ideas of the writer are confused: in some instances he seems to have used Seyäng and Teënchookeaou as synonymous terms. The work from which the essay is taken is comprised in 20 volumes, 12mo., and contains a collection of about 220 miscellaneous papers, chiefly respecting commercial, literary, political, and moral subjects.

ART. II. *Remarks on the euphorbiaceous plants: general characteristics, with a description of the stillingia sebifera, acalypha indica, and the jatropha curcas.* By G. Tradescant Lay.

IN submitting a few botanical remarks to the readers of the Repository, it seems advisable to regard the subjects of study as associated

together in families, not merely because this practice is agreeable to modern usage, but because plants when so considered become a hundred fold more interesting and instructive, than they can be when studied alone and apart from each other, however keen the perception, or experienced the judgment, of the examiner may be. Some of the Chinese writers take pains to show the beauty and cogent nature of those bonds that bind social communities together, when the members are viewed as springing from one great progenitor, like boughs and branches issuing from a single trunk. In a manner analogous to this, groups of plants shift into a most engaging and important light, if we consider the individual genera and species as bound and linked together by common marks of affinity and relationship. These marks of affinity are not always so fine and subtil that they can only be caught by the eye of an erudite botanist; on the contrary, they are often so well expressed and so obvious, that the glance of the common observer, when directed with a little attention, cannot fail to recognize them. Similitudes of structure in flowers and fruits sometimes run parallel with resemblances in use and property; in some families the herbage and the berries are wholesome and nutritious; in others the entire plant, from the root to the seed, contains juices of so active a character, that they become deleterious or salutary to animal life, according as they are managed with wisdom or misapplied by chance. Moreover, we find, by daily practice, that it is not only convenient and useful to view them as forming little assemblages, but that by this method botany, from being a mere accumulation of facts, is changed into a science, affords a logical training to the mind, and advances us a step further into the mysteries of creation, so that we behold its works with a clearer conception, and see something of that plan in which divine wisdom has arranged them.

These brief remarks will suffice for an introduction: to say a word or two in justification of the course pursued was due to the reader; to say much would be paying an indifferent compliment to his understanding. The materials shall be drawn from original sources, namely from the volume of nature herself, whose pages we will turn over from time to time during our sojourn here, as relaxation and refreshment after more important duties, with a hope that the result will yield instruction and delight to others, and help in leading the mind from the trivial, and not always innocent, amusements of the world, to find pleasure in the handy works of God, and to rejoice amidst those hints of wisdom and goodness that are scattered over every one of them. To guide our fellow men to the acknowledgment of the supreme Being, by taking them through the domains of his creation, will not be thought incompatible with this work; and to speak of herbs and trees that grow in China, will perhaps be one way among others of drawing the attention of our friends at home to the concernments of this vast and interesting portion of the globe. It is not proposed to wind up the consideration of one family in a single paper, nor immediately in sequel, but to resume the subject as opportunity offers, and observation presses the subjects upon our attention.

Some of the principal genera that compose the family of euphorbiaceous plants may be mentioned, to aid the conception and assist the memory with their appropriate uses. From the officinal euphorbia a most pungent and active powder is obtained, formerly much in request among veterinary men, before the horse had the advantage of being treated upon milder and more scientific principles. The *Palma Christi* or *Ricinus* yields the Castor oil, and seems to have been the tree that screened the head of the prophet Jonah, since the kiki of Dioscorides and the kikiun of the Hebrews are essentially the same. The *Jatropha manihot* affords the Cassava meal or Tapioca, which when fresh is impregnated with a deleterious juice; the Dryandra or Wootung furnishes the Chinese cabinet maker with an oil for polishing his work; the kernels of the Stillingia give out a sebaceous matter for candles; and the juice of the Siphonia is converted into Caoutchouc or Indian rubber; while the nut of the Aleurites once yielded the Sandwich Islanders means to alleviate the dimness of midnight. Many of them abound with a milky juice, which in drying turns to a dark color and becomes adhesive. The flowers are frequently in clusters, and are of different natures, as some bear fruit while others are barren; they fall off at a joint that seems to be one of the most curious characteristics of the family.

Stillingia sebifera. The Tallow-tree of China. The leaves of this specimen of the Euphorbiaceous family resemble in shape and contour those of the aspen or *populus tremula*, but are smaller and without that expansion in the leaf-stalk so remarkable in that favorite tree. To those who are not acquainted with the aspen we may say, that the leaves are rhomboidal, or like the diamond pane of glass in a cottager's window. They are of a pale and delicate green, and have two corners of the rhombus or diamond rounded off. There is something light and elegant about its aspect, whether it meets you in the diffusive form of a bush, or whether it rises to the height and consideration of a tree. Nothing that might be taken as an emblem of pride or ambition is to be found in this species. Sometimes in the humble form of a weed, it roots under the shade of a hump of granite, at others it helps to form a fence round an enclosure, and now and then overhangs the doorway of a cottage in the imposing form of a most beautiful tree. It is the nature of some plants and trees to be select in their choice of soil, so that they can only be seen in particular and often retired spots; but it seems to be the characteristic of this whole family to be in no wise scrupulous about either soil or situation, for they grow by the way-side, or among rubbish, or wherever earth and moisture can supply them with a modicum of nourishment. This is the cause of great variety in their appearance, so that in the instance before us, a person who has seen a handsome tree called stillingia sebifera, is by no means prepared to recognize it when it peeps from under a monumental stone in the guise of a neglected weed. The spikes of flowers, which terminate the branches, are thin and pliant, and remind us of the barren flowers in some of the amentaceous family, such for example as the poplar and the aspen. Being

small and of a greenish yellow, they do not attract the eye at first, but when looked at with a love for nature there appears something extremely neat and interesting in their figure. Upon this spike the flowers are ranged in clusters, consisting of five, six, or more individuals. Each minute cluster is bosomed in a small involucre or ruff of about five leaves or sepals, and is adorned on each side with a little knop or kidney-shaped gland.

In order to see all this, the spike must be placed under a good working microscope, and the parts be attentively and leisurely separated from each other; if not, it will appear to consist of a number of small yellow points, with little reference to either order or symmetry. Each small flower has a jointed stalk or peduncle, and a minute cup with an enoded edge, which contains a pair of anthers supported by a little pillar in the centre. The pair of anthers fills the cup. The florets come up in succession, as is usual in spikes, heads, and corymbs, and break off at the remarkable joint just mentioned, to make room for their successors. The fruit is not a capsule as some call it, but a drupe, since in the strictness of botanical language a fruit where a nut is surrounded with a fleshy covering is a drupe. This covering splits into three valves when the nuts are ripe, which turn back in the semblance of rays and expose the white nuts in their centre. The nuts have that additional vesture so note-worthy in the euphorbiaceous family, which in consistence and color resembles tallow, and burns freely when ignited, though held at a distance from the flame. The shell is hard and the nut oily, both of which kindle and burn with great readiness.

We may remark that each of the valves is composed of two small valves, a fact when taken by itself of no great importance, but by comparison we find it the case in other members of this family, so that it becomes one of the common marks of kindred, and consequently in a scientific point of view, a bond of union. We have touched upon some of the characteristics of a beautiful as well as a highly useful tree, and one that vouches for the goodness of the Creator, who, while he draws around us the curtain of night, that the burden may be taken from our eyes, has afforded to inventive man various means to lighten the gloom and cheer the melancholy of darkness.

The common way of obtaining the material for this light is, to put the ripe nuts into water, which, in the process of boiling, melts the sebaceous part, but gives it up when cool in the form of a crust floating upon its surface. This is to be sure an easy method, and one, like many other Chinese methods, that does not require much art of chemical skill to conduct it. And yet it contains a chemical fact, that water when heated will dissolve oily substances, which it will not do when cold.

Acalypha Indica. This is another specimen of the euphorbiaceous family, differing from the last inasmuch as it always bears the appearance of a weed. It grows among rubbish in neglected spots, and seem, to be a substitute for the nettle, which it very much resembles in habit, aspect, and smell. In India it is used as a vermifuge for

children, and the leaves are sometimes stuck upon their tongues to provoke the stomach to action. A strong *decoction*, when introduced into the auditory passage, is said to alleviate the ear-ache. Hence it would seem that, though vile and worthless in outward form, it is not wholly without its usefulness. It is not so congenial with our feelings to run to a dunghill when we want medicaments, as it is to repair to the dispensary; but were we certain of our knowledge, we might sometimes do it with equal advantage. The stem is about two feet high, zigzag, green, and scored with elevated lines, which are the leaf-stalks, running down the surface. The leaves have long foot-stalks, are ovate or egg-shaped, and terminate in a point or an acumen. They are tapered at the base, or are in the usual phraseology cuneate, where the edge is even, the rest of it being cut into teeth. The spikes are numerous, as each leaf has one at least. The regular number seems to be three to each leaf, for where only one or two are perfect, the rudiments of the rest may be discovered. The spikes have about ten or twelve fertile flowers, or rather clusters of flowers, in purse-shaped involucres or cups, which have well marked veins and serrated edges. When held up between the eye and the light, a countless number of pellucid dots will be seen, especially when the vision is aided by a good magnifier. The same observation is true of the leaves, and shows that these involucres are only leaves under a different form. Each involucre contains a perfect floret, and the stinted rudiments of two or three others, which may be seen if the former be removed and the eye be assisted by a glass. The floret consists of an exceedingly small calyx in three divisions, a three-cornered fruit roughened with hairs, and three styles or central threads, which are respectively divided into two stigmata, so that we have six points, which correspond with the six volves of the fruit whereof they are the terminations. The Chinese, like Pythagoras and his followers, lay great emphasis upon the properties of numbers, and perhaps took the first hint of this half real and half imaginary science from an inspection of natural objects, where an adherence to a particular number is often very striking. Thus in the present case, we have a three-cornered capsule, three styles, which are subdivided so as to form six or twice three, and apparently, if the scheme were perfect, we should have three spikes for one leaf, and three florets in each involucral cup. Error is often founded in truth, and owes its ascendancy over the minds of mankind and its durability, to the veracity that is mixed up with it. Original minds brought certain truths from the quarries of nature; their successors, deficient in talent and industry, instead of adding to the stock by fetching materials from the same sources, busied themselves in perverting what had been handed down to them. One advantage in the study of nature is this, that it leads us to the places from whence theory was derived, and thus enables us to tell what degree of falsehood, truth, or probability, there is in it. (See Morrison's Dictionary, Yih, 12195.)

The spikes end in a hammer-headed process, which appears of a singular nature, and which, at the moment we are writing, does not seem

very easy to determine. Analogy may hereafter perhaps tell us something about it. At some distance below this head, we find the barren florets, which are very small and easily broken off, at the point we presume, for the stalk or peduncle is so short that we can only guess at the truth of our supposition. Each floret consists of a calyx or cup with four divisions, and a bundle of stamens in its centre. These stamens present themselves as twisted threads, covered with powder or pollen, for the cells that contain it are separated from each other and burst before the expansion of the flower. It is generally understood, among those who have but a little acquaintance with botany, that this pollen or yellow dust is necessary in order to perfect the seed; as the flowers that produce it in the Acalypha are placed above those that bear the fruit, it easily falls upon the places of its destination. Hence we find the spikes upright; had their situation been inverted, the object would have been effected by the pendent nature of the same. It is often curious to see how much wisdom is displayed in providing for the welfare of a weed, and how much instruction might thence be drawn to teach us that the divine goodness is inexhaustible.

Jatropha Curcas. There seems to be some confusion about the history, if not the identity, of this shrub. The individual which we take to be the Jatropha Curcas of former writers differs from the Jatropha, inasmuch as the fertile flowers have a calyx as well as a fine petalled corolla. The oil drawn from the nut is used in the composition of varnish, and for other kindred purposes, by the cabinet-maker. Some have found by experience, that a small quantity of the nut will excite a burning taste in the mouth, and presently after pains in the stomach with their sequelæ; while others, copying from each other with admired fidelity, represent these self-same nuts as wholesome, provided the skin and the germ or embryo be removed. When the writer of these observations had gathered a branch from a tree growing at Kumsing Moon, a Chinese took it from him and cast it down, fearing lest the enticing nuts should be mistaken for an edible fruit. Now all these discrepancies may easily be accounted for, by supposing that different persons saw different plants, alike in outward appearance, but differing widely in structure and quality. In the barren flowers, which grow in spreading clusters at the top of the branches, we find ten stamens or threads collected into a bundle in the centre of the cup; five of them are shorter than the other five, a circumstance that makes one of the essential characteristics in this genus. The anthers, as in most instances of this family burst before the expansion of the corolla, so that the pollen is ready to escape at a moment's warning, as if it were looking out for an opportunity to taste the liberty of a free atmosphere. On the outside of the stamens are five oblong glandular bodies, which at first are yellow, and look like anthers without the workmanship of seam or cell. The corolla is cylindrical, short, and in five divisions, with an interior lined with hairs. Calyx in five uniform segments. In the fertile flowers, the corolla is composed of five petals, ranged in close juxtaposition with each other, and resembling the barren flowers in form and color; the ca-

lyx in five deep segments, which might, without much impropriety, be called leaves. The fruit when ripe is of a yellow hue, smooth and about the size of a walnut, but of a rounder shape. This fruit is properly a drupe, as a fleshy interior contains three nuts, each of them within a separate cell. The nuts are invested with a peculiar covering of a spongy nature, which is very distinct when the fruit is fresh. The leaves are large, wavy, and of a heart-shape, with angles or short lobes. If left alone it will attain to the consideration of a wide-spreading tree, with a deep green foliage, set off by clusters of white flowers, or adorned by a lively yellow fruit. We forgot to mention in its place that the joint may be found in the stalk of the barren flowers, so that the family distinction, to which the Chinese attach so much importance, is here preserved. As a further illustration of this family, we might refer to a Euphorbia and a Phyllanthus that are found in our grassy enclosures at Macao. The Euphorbia may be recognized by the drop of pure white milk that oozes out when the stem is broken, and the Phyllanthus by the minute white flowers, and the neat little seed vessels, that grow among the leaves. In fact, the term Phyllanthus intimates the close connection there is between the leaves and the flower, which the collector will find enjoying all the advantages of harmony and reciprocal affection. In the Euphorbia, the stamens come one after another, and break off at the joint, so often referred to, leaving behind them a little cup whereon they rested. The presence of this joint at once explains the nature of the inflorescence, and teaches us that the stamens are, however inconsiderable of themselves, an entire flower, and that thus the calyx is an involucre, or general calyx corresponding to that described when we spoke of Stillingia. In the Phyllanthus, the same kind of articulation may be found. It seems wonderful that God should have set the stamp of uniformity upon a part that would have been overlooked by 999 persons out of 1000, while it suggests to us the necessity of looking some distance below the surface, if we would learn to philosophise truly and narrate what we have seen with a comprehensive accuracy. In whatever spot we may live, some specimen of this family can be soon obtained, and a successful search after this curious articulation would be a sort of proof both of correct vision and a clear magnifier.

Note. This article was written at Macao, and forwarded to us in November last. Mr. Lay, who is now absent from China on a voyage in the Indian Archipelago, has kindly assured us, as he intimates on a preceding page, of his readiness to contribute to the pages of the Repository. He has a rich field before him, and we look for a plentiful harvest.

Art. III. *Brief account of the Siamese Missionary Dispensary, at Bankok, from August 5th, 1835 to October 5th, 1836.* Under the superintendence of D. B. Bradley, M. D.

[The brief account which we here introduce needs no commendation from us. We regard such papers, not only as valuable records of medical practice, in new situations and circumstances, but as affording many good illustrations of native character and manner. The "spotted" cases, mentioned by Dr. Bradley, are not confined to Siam.]

The Siamese missionary Dispensary was established in Bankok on the 5th of August, 1835. It was at first located on the east bank of the Meinam, 1½ mile below the city wall, in a part of Bankok which is chiefly occupied by Chinese. It was near to the great Chinese bazar. My associates, the Rev. Messrs. Johnson and Robinson, had obtained a lease of the ground and had moved their families thither, a short time before I arrived. The Dispensary was opened in a lower room in one of their houses. For about two months, it was thronged chiefly by Chinese who lived in the neighborhood of the bazar. Such was the crowd and the urgency of many of the cases, that it was utterly impossible to prevent our houses from becoming hospitals. If from a sense of duty to ourselves and families we were constrained to close our doors against the sick, they would still crowd into our verandahs, and thus cast themselves upon our compassion. The relatives and acquaintances of many, who were literally "all corruption," helpless and hopeless, brought them to our doors and then forsook them. Thus our abode was almost constantly the scene of the groaning, the dying, and the dead. Never can I forget the horrors that brooded about us at that time. Yet it was a salutary initiation into medical service in Bankok. While every thing possible was done to ameliorate the temporal condition of our patients, I also gave them Christian books, and set in operation a system of reading, by which it was hoped their minds would be benefitted.

On the 5th of October, a decree from the rulers of Siam obliged me to break up my establishment and seek another abode. The public are already aware of the principal reasons that called forth that decree, and therefore I will not repeat them. Suffice it to say, that they were so weighty, in the estimation of government, that the prospect of taking 600 miserable patients out of my hands (the great majority of whom were convalescent,) and casting them upon a merciless community was not worthy of a thought. It was not untill some time after my return from Chantabun, on the 21st of December following, whither I went for the benefit of my health, that the Dispensary was reëstablished in another part of the city. A floating house, which was purchased for a refuge for one of our families, about the time of our expulsion, was then converted into a Dispensary. A spot, sufficiently large for it to be moored upon, was rented in front of the

Roman Catholic compound, on the west bank of the Meinam, opposite to the city wall and 1½ mile below the king's palace. While this location is far removed from the great Chinese bazar, than which no place so much needs a Dispensary, it has many advantages over the former situation. It does not so much expose us to an overwhelming crowd of the sick. Its being on the great thoroughfare of Bankok, the river, renders it sufficiently accessible. The situation is airy, cool, and clean. It is a little removed from my dwelling house, which is a great relief to myself and family. And in the event of being required to move the establishment again, I shall only have to loose from my moorings and float away with the tide. The house is about 25 feet square, one story high, and raised above the surface of the water two feet by bamboos, which are laid under it horizontally. It is built of teak boards, in the usual style of Siamese floating houses. In addition to this I have "a float," with a cover over it, which is placed in front of the house. On this the patients wait for their treatment. Such is my present situation.

The number of patients, whose cases I have noted in my books, since the opening of the Dispensary, is 3650. To this number should be added about 200 not noted, which would include my itinerant and family practice. It ought also to be stated that, many individuals have in the mean time applied for medical aid, whom I refused to receive, either because they were but slightly ill, or because they were beyond the power of remedial agents. With but a very few exceptions, all the cases numbered were different individuals. This number is composed of nearly the following items. To wit, of—

Siamese	2132	Unmarried	2408
Cochinchinese	61	Married	1242
Chinese from Fuhkeën	159		
Chinese from Chaouchow	713	Priests	172
Chinese from Keaying chow	5	Readers	1308
Chinese from Canton	15	Illiterate	2342
Chinese from Hainan	51		
Peguans	105	Under 10 years of age	177
Burmans	5	From 10 to 20	534
Cambojans	47	From 20 to 30	774
Laos	169	From 30 to 40	859
Indo-Portuguese	5	From 40 to 50	498
Mussulman	186	From 50 to 60	415
Englishmen	7	From 60 to 70	268
Americans	2	From 70 to 80	98
		From 80 to 90	25
Males	2884	From 90 to 100	3
Females	766	One hundred years old	1

The following is a catalogue of the diseases, and the number of each kind, that have come under treatment at the Dispensary.

Abscess	21	Anasarca,	14
Acne	1	Anchylosis	6

Aphonia	5
Ardor Urinæ	4
Ascites	5
Asthma	50
Boil	14
Bronchocele	2
Bronchitis	30
Bullæ	2
Burns	3
Cancer	11
Carbuncle	1
Catarrh	23
Cephalalgia	21
Cephalitis	4
Chorea	7
Costiveness	6
Cough Chronic	31
Deafness	38
Diarrhœa	37
Disease of knee joint	2
Dislocation	2
Dropsy of the knee	1
Dysentery	6
Dysury	6
Ecthyma	101
Eczema	3
Elephantiasis Barbadoes	9
Elephantiasis Græcorum	39
Elongation of uvula	3
Enlargement of nose	5
Enlargement of spleen	2
Enlargement of tonsils	3
Enteric derangement	20
Epilepsy	2
Erysipelas	1
Erythema	2
Exostosis	5
Fever (intermittent)	18
Fistula in ano	7
Fistula in perineo	3
Fistula of salivary duct	1
Fungus haematodes	2
Gastric derangement	19
Giddiness	4
Gonorrhea	5
Gravel	2
Hæmaturia	3
Hæmoptysis	8
Hemiplegia	3
Hepatic derangement	20
Hernia	8
Herpes	166
Hipjoint disease	2
Hydrocele	1
Hydrocephalus	1
Ichthyosis	7
Impetigo	65
Indigestion	38
Induration abdominal	9
Induration of the limbs	3
Inflammation and sloughing of toes	15
Inflammation external	13
Insensible spots	5
Intermittent palsy of tongue	1
Jaundice	2
Jaws bound together	1
Leprosy	30
Lichen	25
Lumbago	4
Lupus	5
Menses, difficult	
Menses, irregular	7
Menses, suppressed	14
Mania	1
Marasmus	6
Nasal excoriation and ulcers	34
Neuralgia	1
Nostrils closed at the entrance	2

Diseases of the Eye.

Amaurosis	20
Night blindness	8
Cataract	39
Ectropia	7
Entropium	9
Obstructed duct	4
Fistula lachrymalis	8
Conjunctivitis	112
Cornitis	93
Nebula	10
Albugo	31
Leucoma	34
Glaucoma	27
Catarrhal	6
Iritis	5
Closed pupils	2

Tremulous iris	5
Adhesion of iris to capsule	6
Pterygium	79
Staphyloma	23
Pustulous	4
Purulent	4
Strumous	1
Lippitudo	19
Tinea ciliaris	3
Granulated lids	7
Epiphora	2
Œdema of lids	5
Tumor on the conjunctiva	1
Hordeolum	2
Foreign substances	1
Double vision	1
Adhesion of lids to each other	1
Laceration of lids	1
Exostosis of the orbit	1
Enlargement of eye ball	2
Miscellaneous.	
Otitis	6
Opium smoking	12
Phimosis	1
Paraphimosis	1
Phthisis	2
Pneumonia	7
Porrigo	5
Petyriasis	3
Psoriasis	175
Paralysis	24
Piles	38
Polypus	2
Purulent urine	7
Papulæ	13
Periostosis	12
Prurigo	8
Pain in the side	7
Pain in the chest	26
Pain in the head	21
Rheumatism	400
Roseola	3
Rubeola	
Renal derangement	3
Sarcocele	27
Stone in the bladder	3
Syphilis	136
Scabies	40
Scrofula	35
Sore mouth from eating betel	22
Strictures of urethra	10
Sore throat	9
Sore lips	9
Scirrhus breast	3
Stiff fingers	5
Sore nipples	2
Tonsilitis	2
Tumours	60
Tenea capitis	5
Tympanitis	3
Ulcers	118
Vesiculæ	4
Variola	9
Wounds.	
Bruised	9
Incised	8
Lacerated	4
Punctured	4
Arm torn off	2
Dog bite	6
Snake bite	1
Fracture	3
White urine	6
Weeping sinew	7
Worms	7
Withered limb	1
Withered nails	3
Warty excrescence	2
White swelling of knee	1

The aggregate duration of all these cases collectively is about 9828 years, the average duration of each individual case being about two years and $\frac{61}{100}$ of a year. More than half of the cases of ulcer and ophthalmia were of many years standing. Two or three morbid cases have been presented, which deserve a separate notice.

1st. Insensible spots. This disease is characterized by spots, varying from $\frac{3}{4}$ of an inch in diameter to the size of the two hands, scattered without order or any particular form on all parts of the body.

They are a shade or two lighter than the healthy surface, exhibit no eruption, are smooth as the natural parts, and destitute of feeling. They may be pinched and scarified in the roughest manner without giving the patient pain; and with this exception of pain, such treatment excites all the symptoms of irritation. They are as susceptible to vesicating and pustulating ointment as any part; but the blisters and pustules when produced give no pain, while those just around their circumference are exquisitely painful. The constitutional symptoms, accompanying them, are scarcely noticeable. But it is regarded by the natives as an alarming disease; chiefly from its being a precursor of the following.

2d. Inflammation and mortification of the hands and feet. This is characterized by periodical inflammation and sloughing of one or more of the fingers or toes. After repeated attacks of this kind, the disease gets hold of a joint, bares it in a small spot, and then dissolves by a slow and tormenting process one ligament after another, until the limb being deprived of all sustenance falls off. The bare stump, after a long time, heals over. In the mean time, the same process is going forward in another limb, or ulcers appear on the bottom of the feet, eating down to the tendons and bones, the sides of which become black and thick, and of the consistence of a horse's hoof, and may be pared off with as little feeling. While these are in progress, the foot is surprisingly contracted and distorted. It is often drawn up into a perfect clump, and this sometimes independent of the falling off of the toes. Thus, while all the toes may still exist or only one or two be missing, the foot of an adult is often not more than five or six inches in length; or the contraction may be only from the sides to the centre; and then the foot is not much more than half its usual width. Those affected with this disease suffer constant pain in the tendons and bones of the diseased limb; and are among the most wretched beings that come under my care. The constitutional symptoms, which at first are not conspicuous, at length assume a frightful aspect. The rheumatic pains extend through the whole frame. The patient has no rest day nor night. The appetite also becomes depraved. The bowels become either excessively irritable or torpid: the eye-balls swell without active inflammation. The eyes become dull and watery, and the face full and flabby. The whole aspect is one of wretchedness unutterable. The Siamese name for this disease is *keruan*, which some one has rendered *leprosy*. This is surely incorrect. There is scarcely a symptom in it, by which it may claim a kin to the scaly diaseses. It has seemed to me to be a little related to Elephantiasis Græcorum. Hitherto I have not discovered any efficient plan of treating it.

3d. Pterygium. This disease, although common to all countries, is of uncommon frequency here, and assumes the rarest forms. It is characterized by a triangular bundle of flesh growing either from the inner, or outer, or both angles of the eye, and extending towards the sight. If not arrested in its growth, it passes over the pupil, involves the cornea in disease, and produces permanent blindess. I have seen

many eyes that were entirely ruined solely by this affection. Its peculiarity in Siam is, that four Pterygia often appear at the same time in a single individual, one from each angle of the eyes. This disease baffles all the skill of the native doctors; but it is, in fact, one of the easiest to treat and cure. It is only necessary carefully to dissect off the fleshy substance form the cornea, and direct the patient to wash his eyes in river water.

Much the greater part of my practice has been surgical. Operations of this kind are of almost daily occurrence at the Dispensary. The following kinds will include the chief of them, viz.: Amputation of tumors, fingers, and toes; excision of staphyloma and cancers; operations for cataract, ectropium, entropium, pterygium, fistulæ; and laying open fistulous ulcers of almost every variety. The following cases will serve to illustrate much of my employment at the Dispensary, during the past year.

Case 1. Duong, a Chinese from Paknam, aged 35 years, a slave of a Siamese, presented himself on the 28th August, 1835, with an ulcerated tumor on the forehead, over the left eye-brow, a part of which it involved. The tumor was eight inches in circumference at its base, and projected over the left eye two and a half inches. It was nearly as large at the apex as at the base. It had been of six years standing, and the ulcer, which involved a large part of it, had existed a year or more. I first attempted to heal the ulcer, but finding it inveterate, concluded that extirpation was the only proper treatment. The patient readily consented to the operation; a trial was now to be made. The king had just before made a special effort to test my skill, and he was waiting to see what I could do. The use of dissecting knives was a wonder to all the people about us. Now arose the thought, what if some untoward circumstance should occasion the death of the person, on whom I proposed to operate, while under the knife? Would not the ignorant natives declare that I had murdered him? If such a message should reach the king's ear, what injury might he do to me, but more especially to the cause which I have espoused? Having carefully weighed these considerations, I determined to go forward in what seemed to be the path of duty, and entrust all the consequences with my Lord and Master.

The patient was seated in a chair with his head supported by my assistant, and his hands held by two men. Sitting down before him I made an elliptical incision, calculating to leave sufficient integuments to meet and cover the wound. But one side of the ellipsis was found too much involved in the ulcer to be depended on for a covering. This circumstance embarrassed the operation a little. The patient soon gave signs that the cutting hurt him more than he had expected. He made desperate struggles to get loose, and finally succeeded; but was quickly prevailed upon to let me proceed with the operation. When in dissecting off the skin I approached the base of the tumor, there was a powerful gush of blood; the crowd of spectators was terrified; and the patients creamed. It was now too late to yield a moment to his plea for release. More help was secured to hold him, and I proceed-

ed as I best could, amid an astounded multitude crowding upon me, the trembling anxieties of my assistants, and the horrible screams of the patient. In four or five minutes the tumor was thrown into the basin, attended by the hearty and boisterous congratulations of the spectators. The lips of the wound were then brought as near together as they could be, and there fastened with adhesive straps. Over these, a larger lint was placed, with a compress and firm bandage to command the hæmorrhage. The patient manifested much gratitude with shame for his cowardice. He declared that the tumor was his property, and carried it home with him. On the third day the dressings were removed. The disease on one lip of the integuments had prevented adhesion by the first intention. By simple and daily dressings, however, it healed over in the course of a fortnight, when he returned to Paknam, so much altered in appearance that his most intimate friends were ready to question whether he were in truth the same man. In more favorable circumstances, the operation could have been performed with ease and without uproar. But in Bankok this was impossible.

Case 2d. A Siamese, upwards of 50 years of age, with long curling locks (which is very repugnant to Siamese taste), a most scanty and filthy dress, a countenance much depressed, presented a fungus tumor on the bottom of the foot, as large as the double fist; it was lobulated, of dark livid complexion, and horribly offensive. It was still more disgusting after I lifted up the sides which rolled over and rested upon the sound parts, and were alive with maggots. The application of the oil of turpentine repulsed the formidable host with great fatality. Having encountered many a hard struggle, with a strong repugnance to touch the offensive mass, I at length resolved upon giving the miserable man the best prospect of returning health, and determined to amputate the fungus. Having prepared the patient a few days by the use of alterative medicines, I then grappled the mass and cut it off. It was impossible to leave integuments to cover the wound, for there was not a particle of skin on the tumor. It had distinct black roots, which extended nearly to the bones. The mass when laid open, exhibited the appearance of a black and softened hoof. There was of necessity a great loss of blood in the operation. The tumor was supplied by innumerable small arteries, which streamed in all directions, and bid defiance to the tenaculum. The hæmorrhage however was assuaged by sprinkling on the part the powder of nutgalls, with the use of a compress and firm bandage. On the second or third day the dressing was removed. A lotion of nitric acid, fifty drops to the ounce of water, was applied daily, followed by the ung. hydr. oxid. Occasionally this was exchanged for sulph. cupri., three grains to the ounce of water, and ung. hydr. mitius. The part healed surprisingly fast. On the sixth or eighth day, while the wound was yet unhealed, there appeared a tumor in the groin of the same leg, which quickly suppurated. Being lanced, it discharged a large quantity of black sanious matter. By injecting chloride of lime, and the external use of ung. hydr. fort., it gradually disappeared.

Then the patient was attacked with obstinate diarhea; while at the same time the foot was doing well. When there remained only a spot, the size of a thumb-nail, unhealed, the enteric irritation assumed a more aggravated form,and vomiting and death ensued. I consider this case as one of the most instructive I have had. I cannot divest myself of the impression, that had I opened an issue in the vicinity of the sore at the time the enteric irritation appeared, the patient might have been saved. A few days before his death, I determined to do this, but was prevented by his absence from the Dispensary.

Case 3d. A Siamese lad, aged fifteen years, from Yuthia; he was of some rank, and of peculiarly interesting appearance. He was affected with a lockjaw. In no respect, but that of the immovability of the jaw, was it like the common lockjaw. The cheek of the left side adhered to the gums. A thick and hard band extended from the outer incisor tooth to the last molares, which bound the jaws so closely together that I could scarcely introduce a thin knife blade between the teeth. There was a little open space on the right side, formed by an irregular canine tooth, through which the boy received his sustenance. The disease was caused by a sore which involved the angle of the mouth, and extended backward on the inside of the cheek. It had been of some years standing. I could think of no plan of treatment that would so certainly benefit the patient as to divide the ligamentous band, and dissect the lips and cheek from the gums, which I did with a scalpel. It was necessary to cut nearly through the cheek to divide the whole band. Immediately the lad could move the under jaw, but with some difficulty. To prevent the divided parts growing together again, the jaws were wedged open with a piece of wood, and lint was put into the wound. It was dressed daily and the patient directed to take the wedge out three or four time in the course of the day and use his jaws. The wound healed in six or eight days. The patient could then open his mouth very comfortably, though there remained a little stiffness, which gradually disappeared while he continued to come to the Dispensary.

Case 4th. A Siamese lad was brought by his father for a cure of a closure of the nostrils at the meatus. His face was much pitted by small-pox, which he had a year before. The healing of the pustules about the nostrils caused one to close entirely, and the other also, with the exception of a hole that would just admit a pin. When the boy inflated the nostrils and attempted to expel the breath through them, I could discover that the extent of adhesion was not more than half an inch. The father was very desirous that I should apply some medicine that would cut a hole through. But I persuaded him that it would be much better to cut holes through at once with a knife. Accordingly the operation was performed, with perfect success, although the lad was the most stubborn that I have ever seen. The neighbors were rallied by his cries, many of whom came to see what was going on. The first use the boy made of his nostrils, after I withdrew the knife, was to snort with vengeance into my face. To prevent the parts closing again, a gum-elastic tube was put into each

nostril, and confined in its place by a narrow bandage. These were daily removed and the parts washed. At length, they were exchanged for sections of goosequills. After about twenty days the patient was discharged quite cured.

Case 5th. A Siamese priest, aged about thirty-six years, well formed and uncommonly goodlooking, presented a nose stuffed entirely full with polypi. It was with much difficulty that he could talk. Air could not be forced through the nostrils. A probe passed readily around the masses of fungus. Having kept the patient a few days, chiefly to show him the futility of all local applications, which he was anxious that I should try, I at length obtained permission to extract the polypi with the forceps. The passages were so filled that I could not reach the peduncles of the polypi, but was obliged to take hold of the first I could reach, and thus bring them away by piecemeals. In this way I finally succeeded in grasping the roots and extracting them, to his great relief and joy. The hæmorrhage was but little, and the pain trifling.

Case 6th. A Chinese, between forty and fifty years of age, presented a fleshy tumor on the left eye-ball. It covered about half of the cornea, and extended far back on the external surface of the ball, crowding the lids an inch asunder, and precluded the possibility of closing them. The patient without one objection consented to an operation. But he became terribly frightened in the midst of it, and pleaded lustily that he might be excused, even when the tumor hung only by a small peduncle on the outer side. He finally fainted and fell on the floor, which circumstance gave me an opportunity, after he recovered a little, to finish the operation to my mind. The eye did well and cleared away rapidly, a few weeks after which the patient ceased to come to the Dispensary; and I have not seen him since; but doubt not that he is cured.

Case 7th. A Siamese priest, upwards of sixty year of age, with a cataract in each eye. He was almost totally blind. With very little preparatory treatment, I proceeded to operate. On the introduction of the needle, one lens was found to be soft and the other hard. The soft one was therefore broken up and the hard one depressed, operating first with one hand and then with the other. A double blind was hung over both eyes and the patient directed not to expose them to the light for any reason. Very little inflammation was induced. The soft cataract rapidly disappeared and the hard one raised a little so that a part of it could be seen behind the pupil. Within three weeks the patient expressed great joy that he could see, walk alone, and distinguish persons without difficulty.

This case is a fair specimen of many of the same kind which I have had. But I ought also frankly to confess that I have often been foiled in my operations for cataract. Nevertheless it does not now occur to me that any serious injury has resulted to any patient from such failures. The failures are probably attributable, 1st, to a want of skill in the operator, 2d, to a want of suitable assistants, and 3d, to a want of suitable accomodations for keeping the patients under daily

inspection, and under the watchful attention of careful and experienced nurses. I am often thwarted in my plans of treatment by the absence of the patients and by their imprudence in diet. No matter how impressively I may charge them touching the caution they ought to observe, no matter how strong the promises they make that they will observe all my directions, it affords no security that they will not absent themselves for weeks after an operation, and then return bearing all the sad results, and offering for their excuse that they were too sick to come, or that their friends would not bring them. Such trials occur almost daily.

Case 8th. A Siamese lad, aged twelve years, the son of a man of some rank, presented a staphyloma of the right eye. Not only was the iris involved in the disease, but also the sclerotica. The protrusion beyond the natural boundaries of the eye was not less than half an inch. It spread the lids far asunder, and much conjunctival inflammation was produced by the constant efforts that were made to cover the protrusion with the lid. The upper lid was also much thickened by the same process. The left eye had suffered violent inflammation, which was subdued and left it in a leucomatous state. There was a small semitransparent spot on the outer side of the pupil, through which the lad could see a little. All this disease was caused by small-pox about a year before. The father, who is a remarkably discreet and affectionate parent, was much disappointed when assured, that, while there was a hope that the left eye would clear away a little, I could give him no encouragement that the right would be of any further service. I assured him that, if he wished the staphylomatous eye to look and feel better, I would operate upon it, and that there was a fair prospect that it could be reduced to a natural size, and be freed from inflammation. He cheered up and requested me to do my best for his darling child. Accordingly, when I had fixed the eye, I cut out an elliptical section from the most protruberant part of the staphyloma, calculating to leave the flaps large enough to form a natural sized-eye. Only the aqueous humor was evacuated in the operation. The lids immediately closed and were covered by a bandage. On the second day a small portion of the iris protruded, which was treated with lunar caustic. The eye is now of a proper size. The wound has entirely healed, and the thickened lid is fast improving. The left eye is clearing and under the use of lunar caustic solution, ung. hydr. oxid. and ung. hydr. mitius, to the eye, pustulating ointment to the neck, and occasional mercurial aperients. The appearance of the child is surprisingly improved and the father is very thankful.

I have performed many such operations with similar happy results. Several priests, who are particularly grieved by any bodily blemish that may be upon them, have been comforted by this operation. Staphyloma is of very frequent occurrence in Siam. I doubt not that there are thousands of cases even in Bankok. But comparatively few apply for aid, because they generally understand that sight cannot be given. I should judge that nine tenths of these cases are produced by small-pox, which is the case also of nine tenths of all the cases of

nebula, albugo, and leucoma, and entire loss of eyes which are very numerous.

I might go on and fill volumes in describing my practice, but it is time to desist. The chief object in writing this communication is, to afford your readers some just impression of what may be done by a physician and surgeon in gaining the confidence of this people. The simple efforts, some of which I have detailed above, have produced a great excitement among the inhabitants of this country. The rumor thereof is not interrupted by distance or jungle or confusion of tongues. It has gone into all the kingdom, and I only fear that it swells rather than diminishes as it recedes from Bankok. Successful surgical practice is far more striking to this people, than successful medical practice. One successful operation, for instance on the eye, is trumpeted more than the effects of a hundred cathartics and tonics. Nevertheless, this puerile ignorant people are disposed to give me great credit as a medical practitioner; and although I am constrained to believe that my medical, as well as my surgical, practice here, has been attended with much success, yet I desire to feel and to say, 'not unto me, but unto thy name, O Lord, belongs all the praise.'

The inquiry arises, how far has the practice been successful. It would be impossible to give a definite answer to this question, because I have not been able to collect data by which one could arrive at the truth. My patients being wholly at their own disposal, have very generally ceased to come to the Dispensary after they have got nearly well, and therefore I know not whether to pronounce them cured or not. They are, too, so accustomed to disease, that they seem to have no desire, or at least no thought, that they may ever be thoroughly healed. Generally, the diseases, have yielded rapidly under treatment. Judging from the general improvement which has been witnessed, and from the reports received from many who have returned to their homes, I may say that, probably, three quarters of the whole number of the patients have been cured, and one half of the remainder benefited in a greater or less degree. A large proportion of cases have been of an aggravated character, especially those of ulcer, ophthalmia, syphilis, herpes, psoriasis, and rheumatism.

A large majority of the patients, I have been obliged to keep under my own care, from two to four weeks, and not a few from three to six months. Consequently the daily numbers have generally ranged from 70 to 150. The most of them are admitted only every other day. I devote the first three hours of every afternoon to receiving the sick, prefering this time of the day because then I feel the least disposed to study. Besides these three hours, I spend one hour early in the morning in overseeing my apothecary, who is an Indo-Portuguese woman. I have two native male assistants in the male department, and one native female assistant in the female department. These departments are entirely distinct, although they receive my attention at the same time. The lotions, ointments, pills, and powders, are all numbered, each kind beginning with No. 1. I have two tables, one in each department, from which the most of the medicines are dispensed. On

these the lotions and ointments are arranged, so that my assistants have no difficulty, although they cannot read the labels, in laying their hands on the medicine prescribed, when they hear the number. The powders, pills, and drops are arranged on another table, at which I sit to write the prescriptions. Mrs. B. has the charge of directing these to the assistants. All the men take their seats, in the order in which they come, on my right hand; and the females, in the same order on my left. The priests and a few of the higher classes are an exception to this rule. It being thought degrading for them to sit with the common people, a different seat is assigned them. Hitherto I have kept a book of records, the object of which is to collect interesting data, and to be a guide to any future remarks which it may be desirable afterwards to make concerning some of the cases. When a new patient presents himself, I note his number, age, country, residence, disease, &c.; and then take a slip of paper and write on it his number and prescription. When a patient returns, he brings with him his former prescription, by which I am reminded at a glance what was last given him, and under which I write a new one, after having inquired into his symptoms and the effects of previous treatment. It is often that I write only the date and 'ditto.' The patients thus prescribed for, then take another seat where again they wait their turn for receiving medicines. They then hand over their papers as they are called for to the assistants, who, not being able to read, carry them to Mrs. B. to be interpreted in Siamese. I do not write them in Siamese, because it would require a longer time to do it, and besides, if they were so written, my assistants could not read them. Those patients who need surgical operations are required to wait until all the prescriptions are made, when they are attended to in their order.

So much for the mode of treating their bodily diseases. But this is regarded as of very small consequence, compared with the effort that is made to benfit their immortal minds. I daily open the services at the Dispensary with prayer, after which I spend ten or fifteen minutes in reading and expounding some portion of the Scriptures. Although I speak the language as yet but stammeringly, I am happy to perceive that some truth by this means is communicated to the understandings of these poor people. Besides, this effort to speak daily, is found most salutary on the score of acquiring the language. I ought also to mention the agency of the Rev. Mr. Robinson, who preaches to the patients every Sabbath day. He is generally favored with a very full and silent audience. We suffer at present very much for the want of Christian books in the Siamese language. The few which the Rev. Mr. Jones prepared, more than a year ago, were long since disposed of, and we are not yet ready to print others. To supply in some degree this deficiency, I allow my teacher to copy the commandments, which I give to all the Siamese patients, whom I request to give them circulation among their neighbors. The Chinese, who come to the Dispensary, are all supplied with tracts On every Thursday, either Mrs. R. or Mrs. B., or both, hold a meeting for the instruction of the

females, at which they relate Scripture facts, and exhort their poor fellow-creatures to repentance and faith in Christ. For this purpose they retire with the females into a separate apartment, while I am engaged in giving similar instruction to the males without. Although we are not as yet cheered by any conversions to God, yet it is encouraging to know that the glorious tidings of salvation from sin have through our instrumentality, and that of our patients, circulated widely in this kingdom of darkness.

Art. IV. *Ophthalmic Hospital in Canton: the fifth quarterly report, for the term ending on the 4th of February*, 1837. By the Rev. Peter Parker, M. D.

The lively interest in this Institution, which its kind and benevolent friends have manifested, gives them a reasonable claim to know its progress and success. Though many of the diseases are similar to those already described, yet occurring in persons of different ranks in society and from different and more remote parts of the empire, and exhibiting the increased influence of these efforts and the unabated confidence of the Chinese, they ought to be reported. The number received at the hospital is 2700; of these, 548 have been admitted during the last term. The following are the diseases presented during the quarter.

1st. Diseases of the Eye.	
Amaurosis	5
Acute ophthalmia	60
Chronic ophthalmia	15
Purulent ophthalmia	15
Rheumatic ophthalmia	1
Ophthalmitis	4
Ophthalmia neorum	1
Conjunctivitis	4
Hordeolum	2
Cataract	42
Entropia	62
Trichiasis	14
Pterygium	46
Opacity and vasculatity of the cornea	70
Ulceration of the cornea	3
Nebula	31
Albugo	26
Leucoma	10
Staphyloma	29
Staphyloma sclerotica	2
Iritis	1
Lippitudo	14
Night blindness	2
Synechia posterior	6
Myosis	7
Closed pupil with deposition of coagulable lymph	8
Procidentia iridis	2
Choroiditis	2
Granulations of the lids	38
Hydrops oculi	2
Complete loss of one eye	25
Loss of both eyes	37
Mucocele	2
Muscæ volitantes	2
Weak eyes	3
Adhesion of the conjunctiva to the cornea	4

Xeroma	2	Ranulae	1
Diseases of the caruncula lachrymalis	2	Polypi of the nose	1
Fungus hæmatodes	3	Amenorrhœa	2
Excrescence from the lower lid	1	Hernia	1
2d. *Miscellaneous diseases.*		Abdominal tumor	1
Abscess of the ear	1	Sarcomatous tumor	5
Abscess of the arm	1	Encysted tumor	1
Disease of the lower jaw	1	Congenital tumor	1
Otorrhœa	3	Rheumatism	2
Deficient cerumen	1	Whitlow	1
Deposition of cerumen	1	Hypertrophy of the heart	1
Deafness	6	Hydrops articuli	1
Dropsy	6	Tinea capitis	1
Ovarian dropsy	1	Scrofula	3
Cancer of the breast	1	Opium mania	2
Goitre	2	Deaf and dumb child	1
		Fungus hæmatodes	1
		Ulcers	2

No. 2214. Nov. 21st. Sarcomatous tumor. Lo Wanshun, aged 41. This interesting woman, of the first society of her native village, had been twenty years afflicted with a large tumor upon the left side of her face. It was situated below the ear, extending forward upon the cheek, and down upon the side of the neck so as nearly to touch the clavicle. As usual, the traces of the cautery and escharotics of the native practitioners were seen upon it; and the patient stated that it had been lanced, and the hemorrhage, in consequence was arrested with difficulty. After having attended to the general health, on the 15th December the tumor was successfully removed. The patient endured the operation with fortitude, characteristic of the Chinese. The loss of blood was considerable; she vomited but did not faint. She feared lest a large eschar might disfigure her face. By making the incision rather perpendicularly, from the ear towards the trachea, sufficient facial integument was preserved, to bring the wound behind and below the angle of the jaw. The wound healed by the first intention, and in ten days the dressing was wholly removed. The face had nearly its natural appearance. Grateful and happy, she returned to her husband and family.

No. 2231. November 21st. Congenital tumor. Wang Keking, aged 27, is the son of a respectable tea broker resident in Canton. The history of the tumor is as follows. It was observed at the birth of the child, that the nates of the right side were unusually large, 'a little fat,' as his nurse expressed it. The child did not attract particular attention till eight years old, when the preternatural enlargement had become conspicuous. Till within a few years the growth was gradual, but for the last four years its increase has been rapid, and it is now nearly one third of the weight of the man. It is suspended, apparently by fibrous bands, from the first of the false ribs on the back, the spinous processes of the ilium, and the nates. Its attachment covers a

surface of about a square foot. The tumor extends a little below the knees. Vertically, from the origin of its base above, to its attachment at the coccyx, it measures 4 feet and 3½ inches. A line drawn directly around the tumor at its base, is 3 feet and 6½ inches; from the spine of the ilium, round and below the pendent portion, to the same point on the opposite side, it is 4 feet. The weight is variously estimated from 60 to 100 pounds. When the man sits down, the tumor forms a circular cushion, which elevates him six inches or more in his chair. It is relaxed according as the weather is hot or cold. In the morning the skin is corrugated upon its surface. The color of the skin upon the tumor, and a few inches upon the back and down the thighs, is of a dark color, resembling a mole. There are masses somewhat distinct, which appear glandular. It is free from pain, and the young man has enjoyed good health. He is of a nervous temperament, all his motions quick, and very sensitive to the slightest touch. When he came to the hospital, there was a large sore, formed by laying upon the right hip, and the callous and dead skin resembled thick leather. At four or five points were issues formed by the native doctors, who had applied cautery, with much accuracy, as if the particular place were essential.

The application of poultices soon removed the dead skin upon the thigh, and both the sore and the issues were readily healed. With the advice of several medical gentlemen, an incision, two inches long and half an inch deep, has been made into the tumor, to ascertain its character. The integument is distinct from the tumor. The substance of the mass resembles udder, cuts smooth, and is so dense as not to be lacerated with the handle of the scalpel. Very little blood came from the incision, and that was of a light delicate tinge. It appears to be of a lymphatic, rather than a sanguineous, character.

Of the feasibility and desirableness of removing the tumor, I have no further doubt, and am corroborated in the opinion by gentlemen, among whom are Scotch, English, and French, surgeons, who have examined the case, and in whose discrimination and judgment I have great confidence. Previous to the incision, the main objection to an operation, on the part of the patient and his friends, was the unwillingness of his wife; the removal now seems more formidable to the patient himself. Whether it shall be attempted or not, depends upon him and his relations to determine.

No. 2261. Nov. 28th. Encysted tumor. Yu Foo, aged 26, is a native of Keängse, and son of the chefoo of Hwuychow. This interesting and intelligent scholar consulted me for a tumor of moderate but increasing size, upon the back of the neck. He was much pleased when told it could be easily removed. He was requested to come upon the next regular day for surgical operations. When extirpated it was found to contain one ounce of dark doughy concretion. The cyst was very strong, and lined with a great number of prominent papulæ upon its inner surface. In five days the wound was healed. A young man, competing with his fellow-students for literary honors, and striving for office in government, could well dispense

with such an incumbrance as this tumor might ultimately have become: and the successful removal of it will doubtless be regarded as a favor by the father, desirous to see his son enjoying, like himself, a situation of power among his countrymen.

No. 2278. December 5th. Patient from Nanking, Chin Sheihkin, aged 23, was accompanied by his father, who said he had come a journey of nearly two months, and a distance of many thousand *le*, with the hope of obtaining benefit for his favorite son. It appeared that a tea merchant, who was in Canton a year ago, had carried to Nanking the intelligence of the institution of the foreigner, and from his representation he was induced, as his last resort, to visit Canton. Learning these particulars, and beholding the amiable and afflicted youth, it was with deep regret little or no encouragement could be given him. The patient had been afflicted for a number of years with chronic rheumatism of nearly all his joints, terminating in complete or partial anchylosis. He could open his mouth sufficiently to speak, and to receive his food. The shoulder joints,-knees, and ankles, were tolerably free, but the elbows, wrists, and fingers, were stiff. In the left forearm, the radius was anchylosed at the elbow and free at the wrist, and the ulna anchylosed at the wrist and free to rotate at the elbow. The hip-joints had only a slight motion forwards and backwards. Any motion beyond what is customary gave him much pain. The father was informed that it would require time to make any perceptible impression upon the disease, and that partial relief was the most he could expect; under these circumstances he came but a few times.

No. 2335. Dec. 5th. Hernia. Low She, aged 41, the mother of nine sons and a daughter, had a large tumor between the umbilicus and sternum. There was a rupture in the linea alba about two inches in diameter, through which the transverse section of the colon protruded and could be seen distinctly under the integument. At times it had caused great suffering. It was reduced, a compress fitted to the aperture, and a bandage applied about the waist, which she was directed to wear. The patient has often been at the hospital with her friends since, and experiences but little inconvenience from what was before a serious evil.

No. 2386. Dec. 12th. Absorption of the vitreous humor. Chow Heënchun, aged 60, from Kaouyaou, was perfectly blind in his left eye. The external coats of the eye were natural; the cornea beautifully clear: the pupil was preternaturally dilated, the lens was opaque and diminished in size, and lay at the bottom of the eye. *The vitreous humor was entirely absorbed*, and limpid aqueous humor filled both chambers. There was no secretion of the pigmentum nigrum, the inner surface of the ball was purely white, traversed by blood vessels of the light tinge of arterial blood. No trace of the retina could be discovered. The whole appearance of the eye was as beautiful as it was novel. It is surprizing that a cause could exist, sufficient to produce such a change internally, and not affect the external tunics.

No. 2399. Dec. 19th. Tumor with fungus. Han Amow, of Can-

ton, aged 12 years had a tumor 2½ inches in diameter, just above the acromion process of the left shoulder, and extending towards the neck. By the application of escharotics, a fungus had been produced, one fourth the size of the tumor, and like a tuft overhung the shoulder, and secreted an acrid discharge, which excoriated the arm. The child was corpulent, and his countenance sallow. At the first incision to extirpate the tumor, there was a slimy discharge, which excited the apprehension that it might communicate with the shoulder-joint, and that the synovial fluid was escaping. Fortunately the secretion belonged to the tumor, and in fourteen days all was well. In laying the child upon the table for the first operation, it was discovered that there was another tumor upon the thigh, larger than the former. Having recovered from the first, the second was also extirpated. The operation was rendered tedious, by the undefined character of the mass. There was no demarkation between the tumor and the surrounding adipose substance; the integument over it could be separated only by the knife. It appeared like a dense collection of gristley globules, increasing in hardness towards the centre. There was the same glutinous secretion as in the other, and in both instances there was considerable exudation of this during the process. The lad is now quite well.

No. 2474. Dec. 26th. A young lady from Nanking, Le Awoo, aged 19, eldest daughter of a silk merchant from Nanking, had suffered from infancy, from a disease of the left eye. At this time, a white spot, with a fleshy excrescence, covered the apex of the cornea; and the blood vessels were enlarged and passed over the cornea. The father was informed that the eye might, at least, be prevented from becoming worse, and perhaps the vision improved. He said he confided the case to my care; had he not confidence, he should not have applied.

By repeated applications of lunar caustic, the fleshy excrescence was destroyed; the blood vessels were divided at the union of the cornea and sclerotica; the general health was attended to, and after applying leeches to the temples, a blister was ordered. New granulations soon filled up the depression in the cornea made by the caustic. The blood vessels of the cornea became indistinct and the sight was improved, and at a little distance, a stranger could scarcely perceive that it differed from the other eye. Just before the close of the term, the father and two daughters came to take a final leave, bringing presents, which were declined, saying it was abundant reward, that the treatment of his daughter had been successful; but he would not take them away. The patient and her little sister, 13 years old, then came into the room, and a servant with a large crimson blanket. The first impression was, this is a part of the present. It was, however, spread at my feet, and the two young ladies knelt upon it. They were authoritatively told it was not required or permitted to "*kow tow.*" They heeded it not, and though I took the eldest by the collar to prevent it, both succeeded in bringing their heads twice to the floor. This was done in the presence of a large assembly of

patients and several Europeans. The father was dressed like an officer, and his daughters wore splendid silk gowns with the richest embroidery. Since the case of the young man from the same city was so hopeless, it is fortunate the result should be so satisfactory in the case of the young lady.

No. 2637. January 23d, 1837. Adhesion of the tarsi. Chun Atsun, aged 14, of Nanhae, at seven years old, had the small-pox, in consequence of which the edges of the lids of the right eye united, except at a small point, near each angle, completely concealing the eye. With a pair of small curved scissors, the lids were separated, and the fine black eye which had neither seen, nor been seen, for seven long years, was in a moment unhooded. This simple operation impressed the spectators more than the successful treatment of half a dozen pulmonic affections would. The case illustrates their ignorance of surgical science.

No. 2638. January 23d. Pterygium and excrescence. Chin Hoo, aged 52, of Pwanyu, had pterygia upon both eyes. Besides four pterygia on the left eye, he had a dark excrescence larger than a kernel of coffee upon the inside of its lower lid. These incumbrances had nearly rendered useless the good eye beneath them. This is an extreme example of a disease very frequent here. One of the pterygia and the excrescence has been removed, and the patient was doing well at the close of the term.

Ascites. Several cases of abdominal dropsy have been treated during the last term. From a woman, 43 years old, who had been afflicted six years, 7 gallons of limpid fluid were drawn off at one time. In a few days she was quite well. From another female, about 50 years old, at a second operation 6 gallons were taken. Her liver was so enlarged as to fill nearly one third of the abdomen. From a young woman, 5 gallons have also been taken away. As soon as it was known that she had been relieved, her incredulous friends came to see if what they had heard were true. The patient did not regard the pain of the operation, but wept for joy when it was over, and she saw her friends congratulating her. Two other dropsical females had each 6 gallons taken away. In one of them, after evacuating the fluid, four hard tumors were found, three inches in diameter, forming a square figure; they could be seen distinctly as the collapsed muscles of the abdomen lay upon them, and were movable from side to side, and towards the diaphragm, but not below the umbilicus. Probably, the attachment was superiorly. The poor woman only desired to live till her son, about 25 years old, should be married. Beyond this she had no desire of life! The same general treatment is adopted, as was related of the young woman in the first report, who seems to have been permanently cured.

The young man who had his arm amputated, enjoys perfect health, and is cheerful and happy, as though no misfortune had befallen him.

In the first report of the hospital, some remarks were made favoring the removal of the tarsus for the cure of entropia, a practice which, though for a time it appears to do well, experience corrects. In many

instances, such is the peculiar curvature of the Chinese eye that the evil continues. There are no cilia to turn in upon the eye, but, in healing, the outer skin unites to the inner edge of the wound, and this, not being a mucuos membrane, soon turns in upon the cornea, and is still a source of irritation. The present mode is, to make the same perpendicular incisions through the tarsi at the lower angle of the eye, avoiding the puncta, and then, with a pair of forceps, invented by T. R. Colledge Esq. for the purpose, to take up a fold of the integument over the upper lid, and with curved cissors cut it out, leaving the fifth of an inch of skin next to the cilia, as the hairs are more effectually everted than when a wider portion remains. The operation is completed, by uniting the edges of the wound with three sutures, and applying adhesive strap. The second day after, the sutures are slipt, and in four or five days the patient is relieved. The forceps so convenient for this operation are made with curved blades, that fit to the convexity of the eye, and are as broad as the portion of skin to be removed, with a slight beard at each point of the crescent. A spiral spring holds fast the integument when seized.—The experience of a large number of cases enables me to speak favorably of the undiluted liquor plumbi, to prevent the return of pterygia, which is not an unfrequent occurrence. After the hemorrhage from the operation has ceased, and the eye is cleansed, one or two drops of this astringent, should be applied to the fresh wound, taking especial care that it do not come upon the denuded portion of the cornea, as it leaves a permanent deposition. To prevent this accident, the eye should be fixed, and an assistant ready with a syringe, in case it be necessary, to wash it away before the deposition can form. For this improvement in the treatment of a very common disease, I am also indebted to the experience of my friend Mr. Colledge.

Art. V. *Edicts from the heads of the provincial government of Canton: 1st, directing inquiries to be made respecting certain foreign merchants, reputed to be traders in opium; 2d, requiring the departure of the said foreigners within half a month; and 3d, extending the time fixed for their departure.*

These three extraordinary edicts have been mentioned in our journal of occurrences; but they deserve to be put "on record." They serve to illustrate the character of the government and the position of foreigners here, and afford curious matter of speculation for both the politician and the merchant. Had the second one been executed, not only would the property of many individuals have been seriously embarrassed, but even the revenue of a great empire might have been affected. The names of the persons mentioned in the edicts we omit, for reasons which were specified in our last number.

No. 1.

Tang governor of Kwangtung and Kwangse, Ke lieut.-governor of Kwangtung, and Wän superintendent of maritime customs, issue these commands to the senior hong merchants, requiring their full acquaintance therewith.

We, the governor, lieut.-governor, and hoppo, have with deep humility received an imperial decree, commanding us,

"In reference to the memorial of the sub-censor Heu Kew, respecting the traitorous natives who deal in opium, the hong merchants who arrange the transactions, the brokers who purchase wholesale, the boat-people who carry the drug, and the marines who, being bribed, connive at their doing so—to examine closely, and strictly apprehend offenders in all these points, to deliberate on the subject with full purpose of heart, to endeavor strenuously to dam up the source of the evil, and to report on the whole subject fully and faithfully. Respect this."

We also, at the same time, received a copy of the sub-censor Heu Kew's memorial, in which we find the following passage:

"The traitorous natives who sell the opium cannot altogether carry on the traffic with the foreign ships in their own persons. To purchase wholesale there are brokers. To arrange the transactions there are the hong merchants. To take money, and give orders to be carried to the receiving ships, that from them the drug may be obtained, there are resident barbarians. The resident barbarians dwell severally in the foreign factories. In the Creek factory is one named * * , and who is nick-named the iron-headed old rat; also one named * * : in the Paoushun factory is one named * * ; also one named * * ; and one named * * * : in the Fungtae factory is one named * * * : in the American factory is one named * * : in the Imperial factory is one named * * * : in the Spanish factory is one named * * : and besides these, I apprehend there are many others."

Opium, we observe, is an article respecting which imperial decrees have been repeatedly received, all commanding its prohibition, and directing that if any foreign trading ship presume to come hither with opium, such ship shall be immediately sent back and not suffered to have any traffic with Canton. And Yuen, formerly governor of these provinces, having taken up and investigated a case of four country ships, *Hat* and others, in which opium had been brought into the port, respectfully received the imperial commands to inflict punishment. He also presented a memorial, suggesting, that, on occasion of any foreign ship entering the port, the senior merchants should be required to examine and enter into securities for her, each in succession; and that, in concert with the several other security merchants, they should be required to examine each vessel, and then to sign a bond, purporting that the foreigners on board such vessel do not bring with them any opium. These voluntary bonds, given by the security merchants, are, according to the constant practice of the said merchants, continued for some time past, presented to the hoppo, by whom they are transmitted for preservation [in the governor's office].

While, however, the foreigners are thus prevented from bringing opium into the port, the receiving ships at Lintin bring the drug

hither, and dispose of it only the more contumeliously. But, were it not for the crafty and artful devices of the said merchants, the encouragements they hold out to bring it, their coöperation and connivance, together with the arrangements, which they make in order that they may divide the spoil, how could the foreigners have it in their power to carry into execution their petty designs? It is surely our bounden duty to inquire into this matter.

Forthwith, therefore, we issue these commands; on their reaching the said merchants, let them immediately ascertain if, the before named foreigners, * * * * * * * * * * * and * * , do or do not severally reside in the Creek, Paoushun, Fungtae, American, Imperial and Spanish factories; of what foreign nations they are; in what manner they continue stationary in this place, and store up and sell their opium; from what year they date their stay in Canton; from what year they date the commencement of their transactions in opium; what quantity of the drug they annually store up and dispose of; and whether they ordinarily insist on payment of the price of it in sycee silver. Let them particularly inquire on each of these points, and faithfully report to us, that we may thoroughly investigate the subject. Should the hong merchants think practically to set aside the laws, and afford aid and coöperation by disguising the subject under false colors, they will find, we apprehend, their criminality too heavy for them to bear. Let them one and all maturely consider and weigh this subject; and, with trembling and earnest diligence, let them obey these our special commands.

Taoukwang, 16th year, 9th month, 19th day. (28th Oct., 1836.)

No. 2.

Tăng governor of Kwangtung and Kwanse, Ke lieut.-governor of Kwangtung, and Wăn superintendent of maritime customs, issue these commands to the hong merchants, requiring their full acquaintance therewith.

We have received from the said hong merchants a paper, purporting to be, 'A report made for our thorough investigation, in obedience to our commands, requiring them to ascertain the reasons why the foreign merchants, * * and others, remain so long in Canton, instead of returning home according to the regulations.'

Having received it, we have again taken this case under our consideration. It is a case brought to our attention by an imperial decree, which we have respectfully received. The subject has been well and accurately laid open, in the statement of the original memorial: and how, in any way, can the fact of these foreign merchants, * * and the others, having made their quarters in Canton for many years, be spoken of as without a cause!

In this report, it is represented, that the receiving ships being anchored in the outer seas, much of the smuggling carried on by traitorous dealers is conducted by means of sea-going vessels, from various parts, approaching the receiving ships, and purchasing from

them. Truly, if, as here represented, all such illegalities are committed without the port, how comes it, then, that the instances that have formerly occurred of seizures have continually been within the precincts of the capital? And, even assuming the truth of their present assertion, that the seizures outside are numerous, those in the capital but few, this only shows the rareness, not the entire want of such seizures. There being then some instances, consequently there must be men by whom the transactions are arranged, and individuals by whom a mutual understanding is brought about.—We, the governor, lieut.-governor, and hoppo, in our desire to preserve uninjured the property and lives of the said merchants, will not withhold maternal kindness, or spare any pains in advising and guiding them. If they acknowledge their offenses themselves, their punishment shall be remitted. But if they continue to report in this irrelevant manner, and turn thus away from the point, hereafter, when once discovery is made of an offense on their part, it will only remain for us to execute the laws and severely inflict the penalties thereof. And if they will not now care for the consequences, they will then be utterly without cause for murmuring against us.

As to the foreign merchants, * * * and the others, it is wholly needless to question their bare, proofless assertions, or at all to doubt, whether their long residence in Canton does indeed arise from the multitude of ships, the business of which they have to transact, and from the circumstance that not a month elapses without a trading ship coming to Canton,—or whether it is not rather owing to their desire to wait and observe the prices in the market in order to make their purchases. For, granting the first assertion to be perfectly true, and that not a day passes in which trade is interrupted, does it, therefore, follow that these foreigners are free to remain, and are never to return home? Or can such a principle as this be admitted? Hear what a memorial, formerly sanctioned, says upon this point:

"If any foreigner, in consequence of its being impracticable for him at once to dispose of his merchandise, is unable to call in all his property, and has therefore no option but to remain in China, then he must, after the foreign ships have left the port, go and reside at Macao, and place his commodities in the hands of a hong merchant to be sold for him; which being done, the hong merchant is to pay him the whole price; and, in the following year, he must avail himself of one of the ships of his nation to return home. If the hong merchants and linguists suffer foreign merchants by degrees to take up their residence in Canton, they shall be severally subjected to strict investigation."

There is, then, not only no permission for these foreign merchants to reside in Canton, but not even any law to permit their long continuance at Macao. Do the hong merchants represent, that the trade of the foreigners needs the parties' own particular attention? For what purpose then are the several hongs for foreign trade established, and of what use are the hong merchants? Are they, forsooth, established in order that the laws may be twisted to serve their private interests? It is, indeed, most unreasonable, that these men should thus

frame their mouths to make pretexts and work out excuses for the foreigners.

The sum of the matter is this: These foreigners are richly imbued with the cherishing and protecting favors of the celestial empire; they ought at once to pay implicit obedience to its laws and statutes, and in all their intercourse, conform to its regulations: thus only may they preserve to themselves the path of commercial intercourse with this country.

At the present moment, the investigations, ordered by the court, are exceedingly strict. If then these foreigners do not bestir themselves and quickly return home, even though it be admitted that they are not residing in the country to sell what is contraband, and though it be granted that the hong merchants do not combine with them and arrange their transactions, yet how can these last reconcile it even to their own minds, that they should suffer the said foreigners to remain here, daily exciting fresh suspicions. Moreover, we the governor, lieut.-governor, and hoppo, hold the direction of this territory, and are bound to eradicate all that is evil, and to bring back to reason the depraved. In chastisements, we show no partiality or leniency; and, having received with reverence the imperial commands to investigate this matter, it the more behoves us to take anxious precautions on every side, equally toward those within and towards those from without the empire. Though it be said, in regard to what is past, indulgence should be shown, yet how can we neglect to pay prudent attention to the future consequences? We desire to impress it on the minds of all, early to look to themselves, and to consider these things long and seriously.

We now issue these commands. When they reach the said hong merchants, let them immediately enjoin the same on the foreign merchants, * *, * *, * *, as also on those who have resided but for a few years, or who have gone away and returned again, namely * *, * *, * *, * *, and * *, desiring them, in obedience hereto, to settle with the utmost diligence their commercial affairs. They are indulgently allowed a period of half a month, in which to pack up their effects, and remove out of the provincial city, and either avail themselves of some expected ships, or of some vessels about to sail, to return to their country. They cannot be allowed to remain any longer. Should any of them be really unable to conclude their business in half a month, then they must go within that time to Macao; but even there, may remain only for a season: and all their goods and accounts they must put into the hands of the hong merchants, the one to be disposed of, the other to be settled, in order that they may speedily return home with all their effects. Nor must they be allowed, by remaining long at Macao, to disobey the fixed regulations. If they dare to continue their stay, it will then be seen, that the said foreigners will not listen to kind language, that they are irreclaimably sunk in folly, and that they are truly such as the celestial empire will not tolerate. And when the effects of the law are visited on them, then, though they have a country to return to,

yet they may find it impossible to escape thither. The factories in which they are suffered to remain shall also, in such case, be closed; and the parties concerned in them shall be brought to investigation. Be careful then not to decide carelessly. Let the said merchants present to us, within three days, signed bonds, that the limited period will be carefully observed, in order that we may be enabled, after thorough examination of the subject, to report to his majesty. Let none oppose this, or delay obedience. A special order.

Taoukwang, 16th year, 10th month, 15th day. (23d Nov., 1836.)

No. 3.

Tâng governor of Kwangtung and Kwangse, Ke lieut.-governor of Kwangtung, and Wân superintendent of maritime customs, issue these orders to the hong merchants, requiring their full acquaintance therewith.

We, the governor, &c., have received the subjoined report from the said hong merchants:—

Your excellencies' commands were received, directing us immediately to communicate to the foreign merchants, * * and others, that they are severally to finish with the utmost diligence their commercial affairs; that they are indulgently allowed a period of half a month, in which to pack up their effects and remove out of the provincial city, after which they are either to avail themselves of some expected ships, or of some vessels on the point of sailing, to return to their country; that they cannot be allowed longer to loiter about; and that, should any of them be really unable to conclude their business in half a month, they also must remove within the time prescribed, but may go to Macao, and remain there for a season; that, however, they must not be allowed by remaining long at Macao to disobey the fixed regulations. On the receipt of these commands, we examined our documents, and found, that in our former report we had already stated that there is no such person here as * * . With the exception therefore of him, we, in obedience to the commands received, enjoined it on the said foreign merchants, * * and the others, that they should obey the same, should settle with the utmost diligence their commercial affairs, should within the prescribed period of half a month remove from Canton, and either return home, or go down to Macao; and that if there were any who really were unable to conclude their business in half a month, they should place their merchandise and their accounts in our hands, that we might dispose of the one and settle the other for them. We also desired them to give us written bonds that they would carefully observe the limited period, in order that we might present the same.

Having thus done, we received from * * a note, stating, 'that as soon as he had concluded his sales and purchases, about the first month of next year, he will return home.' We received also a note from * * , stating 'that he has determined to go home, and that at the end of this year, he will avail himself of a vessel sailing back to his country.' We also received replies from * *, * *, * *, * *, and * * severally, stating, 'that at present ships are arriving in great numbers; that it is necessary that they should purchase cargoes for them before they can sail again; and intreating a delay until such time as they have concluded their sales and purchases, when they will go down and reside at Macao.' Having reported these answers, we received your excellencies verbal commands, to the effect, that the language of the several foreign mer-

chants bore marks of a desire to delay; and that they should therefore still be directed to move out of the provincial city, as before ordered, within the prescribed time. After we received these directions, we again enjoined the commands, and called on the foreigners to act in trembling obedience thereto.

"Having done this, we have now received a reply from * * , still intreating 'that he may wait until he has concluded his sales and purchases, and that about the first month of the next year he will return to his country.' From * * we have also received a reply, still 'requesting that he may be allowed to clear up his accounts, and at the end of this year he will return home.' From * * also we have received a reply, intreating 'that he may be allowed to stay until his commercial affairs are concluded; and then, in the third month of next year, he will return home.' * * has replied to us: 'I am now conducting my mercantile transactions with the utmost diligence. I beg that I may stop till the first month of next year, when I will go down and reside at Macao.' * * replied: 'Many ships to my consignment still remain anchored at Whampoa; and it is requisite yet to purchase silk, and teas, and other goods for exportation. The teas this year are reaching Canton later than is ordinarily the case. I intreat that I may be allowed to remain till I have purchased all the goods required, and till the ships have all left the port; and then, in the fourth month of next year, I will go down and reside at Macao.' From * * and * *, we have received answers, 'that they have now ships at Whampoa to their consignment; that they have to purchase silks, teas, and other goods for them to export; and that they intreat, therefore, they may be allowed to stop till they have completed all their purchases, when, in the third month of next year, they will go down and reside at Macao.' Lastly, * * has replied, intreating 'that he may be allowed to complete his sales and purchases, when, at the end of this year, he will go down and reside at Macao.' These all having reached us, it is our duty to report the particulars, and ask if your excellencies will deign to grant the requests of the several foreign merchants, which must proceed wholly from your excellencies' grace and favor."

This report having come before us, we, the governor, lieut.-governor, and hoppo, have again taken the subject into consideration. In the regulations there is no article permitting foreigners to abide in the provincial capital. Out of former chance-inadvertence has grown up a stay and continuance therein of several years' duration. It is, indeed, an infringement of the established enactments. Admit that these foreign merchants quietly attend to their commercial duties; grant that they and the hong merchants are not mutually drawn into acts of depravity; yet suspicions have arisen, in the place of their stay, that they have taken their quarters here for the purpose of combining with natives to dispose of contraband goods; and the expression of these suspicions has ascended even to the ninth heaven (the imperial presence), and has called down from the great emperor strict orders to investigate the subject.

Now, having received the above detailed report, we, the governor, the lieut.-governor, and the hoppo, look upwards, and would embody the extreme desire of the sacred intelligence to cherish strangers with tenderness. In seeking condescendingly to yield to the dispositions of foreigners, what need is there to be over-strict and harsh? But if the period be too long extended, we shall not only be unable to find

words to report it to his majesty; but also, by partiality and connivance, we shall greatly derogate from the dignity of government. We have therefore jointly deliberated and determined on our course of action. The three merchants, * * , * * , and * *, who have pleaded for a delay, at the same time purposing to return to their country, may be allowed their requests, namely to return severally at the end of this year, and in the first and third months of the next year. They may return at the periods they have named. The two merchants, * * and * * , also, who have requested that they may go and reside at Macao, are allowed to do so at the times named, the close of this year, and the first month of next year. But with regard to the three merchants * * , * * , and * *, who, without having named a period for going home, seek to go and reside at Macao, and yet ask to stop till the third and fourth months of next year before they go, manifest the most absurd and foolish conduct. From their statements, however, it appears that they have yet many ships here, and they have need to purchase cargoes for them. We therefore will indulgently permit an extension of the period, prescribing to all of them the second month of next year, at which period they must go to Macao. Between this date and the second month of next year four months will elapse; and in that period they may transact all their affairs; or if some do remain unfinished, yet they will be able to make Macao their place of sojourn. We certainly will not permit the least extension of this period, or opposition hereto. We the governor, the lieut.-governor, and the hoppo, are this day sending a memorial, by express, to inform the great emperor that periods have been fixed for the departure severally of the said foreigners; and on no account will we make any change.

Let the said hong merchants take signed bonds from the said foreign merchants, severally, to observe this prescribed limit; and let them also give bonds for themselves, that they will not presume to suffer their stay beyond the period prescribed: the hong merchants shall be held responsible for them in their property: and these bonds they must deliver within three days. Let them not seek and hope for delay. And, as the said foreign merchants successively depart, let them on each occasion report the same, that examination may be made. If when the periods elapse they still linger and hesitate to go, it will then be seen that these foreign merchants are bound up in the love of their own private interests, and that they are minded to offer contumelious opposition. We, the governor, lieut.-governor, and hoppo, in the performance of our duties, will not assume the slightest degree of false coloring and vain pretext; nor will we show the least personal regard and consideration. We can only pursue our course with firm maintenance of the laws; ruling well, on the one hand those without, on the other those within, the empire's pale; and thus aiming to display gloriously the majesty of heaven (the emperor). Say not that you were not forewarned. Tremblingly and attentively consider this. A special edict.

Taoukwang, 16th year, 11th month, 6th day. (13th Dec., 1836.)

Art. VI. *Cultivation of the poppy, in Europe, China, and India; extent and quality of land so occupied; time and mode of culture; and the amount of population and capital engaged therein.*

The Papaver somniferum, now so extensively cultivated for the purpose of obtaining its "inspissated juice," though probably a native of India, has been naturalized throughout almost every part of China and Europe. It was known in ancient times. Homer speaks of it under the name of Μηκων; and Virgil calls it Cereale Papaver, also soporiferum. Ovid makes the night to be crowned with it. In Hindústan it is called *post;* and by the Cingalese *albin atta.* The Japanese call it *kesi*, also *jeisoku;* and the Chinese, *yingsuh.* In modern Europe, it is the *garten-mohn* of the Germans; the *mak* of the Bohemians and Hungarians; and the *maczek* of the Poles. In the Linnean system, it belongs to the class polyandria, and order monogynia. It is an annual plant, with a glaucous colored stem, smooth, erect, and round; it seldom rises higher than five feet, has large, simple, obtuse, lobed and cerenated leaves, embracing the stem, on which they are alternately placed; its flowers are large, terminal, and of a silver-grey, tinged with violet at the base.[1] In the wild plants the flowers are provided with only four petals; but in the double varieties the petals are very numerous, and vary in color from white to red and deep violet, with a hundred intervening shades. The capsules contain a great number of seeds.[2]

In Europe, the poppy is found as an ornamental plant in gardens; it is also extensively cultivated, but chiefly for the sake of the oil which is obtained from the seeds. The time of sowing is in autumn, and the crop is ready for harvesting in July or August following. The oil is used for culinary purposes.[2]

The greatest part of the opium used in Europe, as well as a part of that which finds its way to China, is produced in the Turkish empire. The process of cultivating the poppy and manufacturing the drug is very simple. When the poppies are fit for the harvest, the flower falls off, and the people, in the evening, go into the plantation, and with hooked knives make circular incisions round the capsules; from these there exudes a white milky juice, which, being exposed next day to the heat of the sun, concretes into a dark brown mass, and forms crude opium. On the next and several succeeding evenings they come and scrape this off, as long as the plant continues to exude it. This is called by the Turks *measlac*, and by the Greeks Ὀπιον, which literally signifies juice, and hence the name opium. That sent to Europe is always adulterated. They boil down the poppy heads with other narcotic plants, and having inspissated the juice, wrap it up in poppy leaves, and so send the impure mass in cakes to the market. The pure *measlac* they generally keep for their own use, when they wish to make *kef*, i. e., enjoy "an undefinable sensation of

pleasure." Accordingly, when a Turk wishes to make *kef*, he takes a drachm of opium; then adds a draught of water; and, throwing himself on his divan, is soon wrapt in Elysium.[3]

In very remote times, the Chinese seem to have known but little of either the poppy or its "inspissated juice." The latter they call á-fooyung, also ápeën, and vulgarly yápeën. They say, however, that the signification of the name is not clear: "by some it is said, that á, in certain foreign languages, is the pronoun of the first person, and that the plant, from its resemblance to the fooyung (hibiscus mutabilis), is named áfooyung, 'our hibiscus.'" The same author, who by the by wrote more than two centuries ago (yet here centuries past are but as years), gives the following account of the cultivation of the poppy. "Opium was formerly but little known. Those who have employed the drug in modern times, say that it is the exuded juice of the poppy. It is procured in the season when the poppy produces a green head, by piercing the outer green skin, with a large pointed instruments, in four or five places, being very careful, however, not to injure the inner integuments. This is done in the afternoon. The next morning, when the juice has exuded, it is scraped off, with a knife made of bamboo, placed in earthen pots, and dried in the shade. Hence we see the reason why the drug, when brought to the market, often has pieces of the pericarp mixed with it. Wang, in his "Medical Collectanea," states, that it is procured from the red poppy of India, and that water must not be allowed to rest upon the heads, from which the juice is obtained, by piercing their green skin, which is done after the decay of the flowers, in the 7th and 8th months. But (continues the same author), the poppy having flowered and produced its fruit in the 5th month, how can there be any green skinned head to it in the 7th and 8th months? Perhaps, however, the period of flowering in India may be different from that in our own country."[4]

In modern times, the cultivation of the poppy has been greatly extended in China; and memorials to the emperor, requesting that prohibitions might be enacted to prevent this, have been presented from the provinces of Fuhkeën, Kwangtung, Chékeäng, Shantung, Yunnan, Kweichow, &c. One of these memorials will serve as a specimen of the others, and afford some idea of the present mode and extent of cultivating the poppy and of manufacturing the drug in China.[5] The memorial was written in 1830, by a censor, named Shaou Chinghwuh, a native of Chékeäng. He names five departments, which probably include about one half of the province: they lie contiguous to each other, between the parallels of 27° 31′ and 30° N. lat., and between 2° and 5° lon. E., of Peking. The following is the memorial.

"Shaou Chinghwuh, censor, superintendent of roads, &c., &c., in the province of Chěkeäng, presents this memorial, in order to obtain the imperial will on the subject of which it treats.

"Opium is a product of foreign countries, and at first was only occasionally included in the list of medicines. Subsequently, villainous people induced others to use it; and in this way the contaminating practice has passed from one to another, till it has spread over the

whole country. It is, indeed, a *flowing poison* of no small influence. Traitorous natives have also, lately, engaged in planting the poppy and preparing the drug for sale. In Chĕkeäng, my native province, the planters are the most numerous in the department Taechow foo; next to it, in the number of cultivators, are Ningpo foo, Shaouhing foo, Yenchow foo, and Wänchow foo. The mode of culture, as I have heard it described, is this; the seed of the poppy is sown in the 10th month of the year; in the 4th month of the following year, when the heads are formed, they are cut open and the white juice exudes. In this manner, may be obtained from one mow of land [about 6600 square feet] four or five catties [1⅓ lbs. per catty], which is boiled down to the consistency of soft clay. The article thus obtained in Taechow foo, is called the Tae juice, i. e., the juice of Taechow. There are some also who obtain opium from species of the alcea and hibiscus; and hence it is named, the juice of the alcea, or of the hibiscus. These two kinds of opium are quite like that which is brought from beyond sea, and there are large companies of petty traffickers, who, going continually from place to place, sell the drug, and thus openly and knowingly violate the laws. If this now be considered a trivial matter, and is not interdicted, it will, eventually, become so general, that government will be afraid to interfere. The said people, like flocks of ducks, run after gain; for it is supposed that from an acre planted with poppies, ten times as much profit can be gained as from one planted with rice. The people, therefore, presuming that government will not issue strict prohibitions, go to the utmost excess, without the least fear; and around all the cities, villages, hamlets, and markets, belonging to the departments named above, every place is covered with poppies; and all the inhabitants, both men and women, old and young, are employed in the production and sale of opium. Thus, within less than ten years, the evil has spread over a large part of this province, not only bringing injury on the good, but greatly retarding the work of the husbandman.

"I have heard, also, that in the provinces of Fuhkeën, Kwangtung, and Yunnan, the people produce and sell opium; and hence the drug is called the juice of Fuhkeën, the juice of Kwangtung, &c., according to the province in which it is produced.

"Considering that your majesty has frequently issued interdicts against the introduction of foreign opium, in order to stop villainy and prevent calamity; that the people are in multitudes planting the poppy and selling the drug; and that, if this cannot be effectually stopped, there is reason to fear, lest the effects of the flowing poison, spreading over every province of the empire, will eventually become more ruinous than the effects of that brought from beyond sea; it is my bounden duty to request, that your majesty will be pleased to order the lieut.-governor of Chĕkeäng, and the great officers of all the other provinces, carefully to examine the subject, and devise means for stopping the cultivation of the poppy and the production of opium, faithfully carrying into execution your majesty's commands. Then the sources of the evil will be effectually closed up, and the people

daily increase in affluence. Whether my humble views are right or not, it is still my duty to lay them before your majesty."

In India, the extent of territory occupied with the poppy, and the amount of population and capital engaged in its cultivation and in the preparation of opium, are far greater than in any other part of the world. Malwa, Benares, and Behar (Patna), are the chief localities; and nearly every chest of the drug, exported from India, bears one of their names, according to the part of the country in which it was produced. About one half of the whole product of India is obtained from Malwa. Though the chiefs of Malwa are under British protection, the management of the soil is entirely beyond the Company's authority, and both the cultivation of the poppy, and the production of opium are free. The traffic in the drug is also free, excepting "transit duties," which are levied upon it when passing through the British territories,[6] as most of it does, on its way to Bombay, from whence it is exported to China. But in Benares, Behar, and throughout all the territories within the Company's jurisdiction, the cultivation of the poppy, the preparation of the drug, and the traffic in it, until it is brought to Calcutta, and sold at auction for exportation, are under a strict monopoly. Should an individual undertake the cultivation, without having "entered into engagements with the government to deliver the produce at the fixed rate," his property would be immediately attached,[7] and the ryot compelled either to destroy his poppies, or give securities for the faithful delivery of the product. Nay, according to a late writer,[8] "the growing of opium is compulsory on the part of the ryot." Advances are made by government, through its native servants; and if a ryot refuses the advance, "the simple plan of throwing the rupees into his house is adopted; should he attempt to abscond, the peons seize him, tie the advance up in his clothes, and push him into his house. The business being now settled, and there being no remedy, he applies himself as he may to the fulfilment of his contract."

Vast tracts of land, formerly occupied with other articles, are now covered with poppies, which require a very superior soil in order to produce opium in perfection.[9] Hence, its cultivation has not extended over waste and barren lands, but into those districts and villages best fitted for agricultural purposes, where other plants, "grown from time immemorial," have been driven out before it. But though poppies are now spread over a wide extent of territory, the cultivation is still, as it has long been, rapidly on the increase. In 1821, in the single district of Sarun, belonging to the province of Behar, there were, according to the testimony of Mr. Kennedy (many years collector of land revenue and deputy opium agent in that district), between 15,000 and 20,000 bigahs of land (about $\frac{1}{3}$ of an acre per bigah) then under cultivation; in 1829, the amount was nearly or quite doubled.[10] And the produce, in the mean time, had increased in a still greater degree. No plant, perhaps, depends so much on the soil, the season, and the mode of culture, as the poppy. In some districts, a bigah yields no more than one seer, or rather less than 2 lbs. While in others, ten,

twelve, or more, times that amount is obtained. In the district of Sarun, the average was supposed to be five seers per bigah.[11] Not only should the best soil be selected, and that which can be easily irrigated, but careful attention should be given to the plant, through every stage of its growth, in order to bring it to prefection. Owing to its structure, having a long slender stalk and a heavy head, it is easily destroyed.[12] Sometimes the finest crops, covering the ground with white flowers like drifted snow, promising abundant produce, have been in an hour utterly ruined by hail-storms. Also the state of atmosphere, and the course of the winds, during the time the juice is being collected, greatly affect the produce. The best quality, and the greatest quantity, are obtained, when, with a very gentle breath from the north west, there are heavy dews, and the juice exudes freely, and so thick that it will not fall to the ground.

The mode of cultivation pursued in the "Patna district," may afford a good idea of that which obtains in other places.[13] The ryot, having selected a piece of ground, always prefering (cæteris paribus) that which is nearest his house, encloses it with a fence. He then, by repeated ploughings, makes it completely fine, and removes all the weeds and grass. Next he divides the field into two or more divisions, by small dikes of mould, running lengthways and crossways, according to the slope and nature of the ground. He afterwards divides the field into smaller squares, by other dikes leading from the principal ones. A pit, or sort of well, is dug about ten feet deep at one end of the field, from which, by a leathern bucket, water is raised into one of the principal dikes, and in this way it is carried to every part of the field, as required. This irrigation is necessary, because the cultivation is carried on in the dry weather. The seed is sown in November, and the juice is collected in February and March, during a period, usually, of about six weeks. Throughout the whole process, the ryot is assisted by his family and servants, both women and children. As soon as the plants spring up, the weeding and watering commence, and are continued till the poppies come to maturity. Perpendicular cuts or scraches are then made in the rind of the bulbous heads, with a muscle shell, found in all the tanks of the country. From these cuts the juice exudes, and is daily collected and delivered to the local officers.[14] This is a very tedious process, requiring constant attention. When the poppies are exhausted, their color changes from green to white. The seeds contain no opium, and the labors of the season are now closed. The cultivator receives about 3½ rupees ($1.65) for each seer of the poppy-juice, which is required to be of a specified consistency.[15] This must be such that a gomastah can take it out of the vessel in which it is brought for delivery by the ryot, and turn it over without its dropping off his hand: if it is not sufficiently dry to admit of this, it is either returned to the ryot for further evaporation, or an additional quantity must be delivered to make up the deficiency.

The lands under cultivation are measured every year,[16] and their boundaries fixed, in order to prevent collision among those to whom they are assigned. The government annually enters into an en-

gagement with the cultivators, through an intermediate agency, constructed in the following manner: there is, 1st, a collector, who is a European; 2dly, there are gomastahs, a superior class of men, both in education and caste; 3dly, sudder mattús, a respectable class of landholders; 4thly, village mattús, the principal villagers, a little superior to the ryots; and 5thly, the ryots, the chief laborers in the cultivation of poppies.[17] The "engagement," entered into with the government, is this: when the poppy is ripe, and immediately before the period of extracting the juice, the gomastah and his establishment make a circuit of the country, and form, "by guess," a probable estimate of the produce of each field.[18] *He then makes the ryot enter into an engagement with him to deliver the quantity thus estimated*, and as much more as the field will yield, at the price previously fixed; if he fails to deliver the estimated quantity, and the collector has reason to suppose he has embezzled the deficiency, he is empowered by law to prosecute the ryot in the civil court for damages.

The product in India, for the last year, it is said, amounts to about 35,000 chests. The Malwa averages about 134 lbs. per chest; the other, 116 lbs.[19] The weight of a chest, however, varies; and is sometimes 140 lbs. In Turkey, the product may be 2,000 or more chests, annually. In regard to China, we have only the testimony of the counselor Choo Tsun, respecting his native province, Yunnan. The poppy, he says, is cultivated all over the hills and open campaign, and the quantity of opium annually produced there cannot be less than several thousand chests.[20]

From the foregoing statements, derived chiefly from official documents, the reader will be able to form some opinion, as to the extent of territory, and the amount of population and capital, now devoted to the production of opium. Taking into the account, the whole of Turkey, China, and India, it will be seen that, many thousands of acres, with millions of the inhabitants, are employed in the cultivation of poppies. The preparation of the drug for market, the traffic in it, its various uses, &c., are topics worthy of consideration, and may be noticed in subsequent numbers.

Notes. 1, Ainslie's Materia Indica, vol. 1, p. 275. 2, Encyclopædia Americana, vol. 9, p. 396. 3, Dr. Walsh's Residence at Constantinople, vol. 2, p. 192. 4, Le Shechin's Puntsaou Kangmuh, sec. 23, p. 23. 5, Peking Gazette, No. 97, dated Aug. 25th, 1830; also Can. Reg., vol. 3, No. 24. 6, Thornton's State and Prospects of India, p. 231. 7, Kennedy in evidence on E. I. affairs, No. 768, 1833. 8, Singapore Free Press, Feb. 25th, 1836. 9, Stark in evidence, on E. I. affairs, No. 266. 10, Kenn., No. 718. 11, Ibid., No. 776. 12, Ibid., No. 1080. 13, Singapore Free Press, vol. 1, No. 21, Feb., 1836. 14, Stark, No. 257. 15, Ibid. No. 232; and Kenn., No. 789. 16, Kenn. No. 769. 17, Ibid., Nos. 721 and 735. 18, Ibid., No. 781. 19, Mr. Fleming's Papers on revenue, p. 401. 20, Chinese Repository, vol. 5, p. 393.

Art. VII. *Literary Notices:* 1, *Proceedings of the Royal Asiatic Society of Great Britain and Ireland, with regard to its literary researches in China;* 2, *the Periodical Miscellany and Juvenile Instructor, published at Malacca; and* 3, *the Sandwich Island Gazette and Journal of Commerce.*

Some months have now elapsed since a document was put into our hands, containing extracts from the minutes of the committee of correspondence of the Royal Asiatic Society of Great Britain and Ireland. The document is dated London, June 30th 1835, and came accompanied by a note, containing the expression of a wish from the chairman of the said committee, that the "minutes" might be published in one of the periodicals of Canton. The minutes commence with an enumeration of the several publications and institutions, which, within a few years, have been originated and supported "by European and American residents at Canton and Macao." Allusion is then made to the "instructions which were given by the Royal Asiatic Society to the late lord Napier," on his departure from England, with regard to researches in China. After which, the chairman proceeded to remark on the extensive and happy influences likely to result from those institutions and publications which had been commenced. He then added, "that the exertions which are making by many Europeans and Americans at Canton and Macao are, considering the nature and variety of their own avocations, equally remarkable and praiseworthy. The Americans are heartily coöperating with Englishmen in diffusing amongst the Chinese a knowledge of the same language, the same religion, and the same improvements in arts and sciences. The most pious and the most zealous of the Christian missionaries are employed in acquiring a thorough knowledge of the manners and usages of the people, at the same time that they are translating the Scriptures into Chinese, and circulating the principles of Christianity in several parts of the country. Medical men, besides attending to the ordinary duties of their profession, are active in forming and superintending hospitals for the relief of the sick, as well Chinese, as Europeans and Americans. And British merchants, besides being engaged in their extensive trade, are bestowing, not only a portion of the gain, which they have acquired by their talents and their industry, but a portion of their time, which is of so much value to them in their extensive business, to the support and furtherance of these philanthropic establishments."

The chairman next mentioned the names of some individuals, connected with one of the societies, and then further added. "The part which these, as well as other gentlemen engaged in trade at Canton and Macao, have taken in the formation and support of this, and of the other societies which have been mentioned, show that the enlightened British and American merchants at Macao and Canton

entertain the most statesmanlike and liberal views with respect to the moral and religious improvement of the people of China; and that the extension of British trade, when unfettered by any restrictions, is the most efficient mode of introducing into every part of the world a knowledge of the arts, sciences, and civilization of Europe, and thereby increasing the prosperity and happiness of mankind."

After a vote of thanks had been passed by the committee for sundry publications received from China, "the minutes" conclude with the following paragraph.

"On the motion of the chairman, the Committee resolve to propose to the Council the following gentlemen as Corresponding Members of the Society: the Rev. E. C. Bridgman; J. Matheson esq.; T. R. Colledge, esq.; Alexander Johnston esq.; and the Rev. Charles Gutzlaff as a Foreign Member: and authorize the chairman to assure the Society [for the Diffusion of Useful Knowledge] at Canton, through Mr. Matheson, of their anxiety to coöperate with the society in every way they can; and adopt such means as may be necessary to secure the mutual coöperation of both Societies, that of the Royal Asiatic Society in England, and that for the Diffusion of Knowledge in China, in attaining the literary and scientific objects which they respectively have in view."

2. *The Periodical Miscellany and Juvenile Instructor: Malacca*, 1836. This is a monthly publication, in 8vo., each number containing 24 pages. Owing to the number of copies first printed, not being sufficient for all the subscribers, it became necessary to print a second edition of the early numbers; and it was only very recently that we received a specimen of the work. The "Miscellany" for seven months, from June to December 1836, is now before us. The character of the work may readily be gathered from its titlepage, which might be rendered still more appropriate, by a slight alteration, placing the second part before the first. The main object of the work seems, in fact, to be the instruction and amusement of the young. To effect this object, it is chiefly composed of brief articles of a moral tendency, short papers on subjects of natural phylosophy and history, fragments, and miscellanies, interspersed with a few articles on the literature, and manners and customs, of the Ultragangetic nations. Three articles have appeared on the Chinese language, chiefly as spoken in the dialects of Fuhkeën (or Hokkeën, as the natives pronounce it). They contain the germ of valuable matter, but it has not been suffered to grow into a ripe and beneficial fruit, the subject being treated too much in the manner of one writing in great haste. We confess ourselves somewhat disappointed, also, in finding so little information on the very interesting topic of Ultragangetic nations,—seven numbers of the Miscellany having appeared, without any original articles under this head, except the three on the Chinese language above alluded to. Were we stationed, for a moment, at the editor's elbow, we would gently hint to him the propriety of referring to the topics enumerated in his prospectus. (See our No. for August, 1836, p. 151.

We are aware that time should be granted to an editor in this quarter of the world, to enable him to render his work such as he himself must wish it to be. But we are also sensible, from experience, that it, amid numerous engagements, he is liable to forget promises made at the commencement of his undertaking. We feel confident, however, that, if his friends will do their part in contributing to his pages, the editor will gradually improve his work, and that the Periodical Miscellany will erelong become a valuable repository of interesting information, and a worthy successor to the Indo-chinese Gleaner, so ably conducted by Dr. Milne, amid numerous discouragements and difficulties, until his death in 1822.

3. *The Sandwich Island Gazette and Journal of Commerce*, is published at Honolulu, Oahu, every Saturday. S. D. Mackintosh, editor. Terms $6 per annum. The first number appeared on the 30th July, 1836, with the sanction of his majesty, the king of the Sandwich Islands, then absent from Honolulu, expressed in the following note.

"To Stephen D. Mackintosh. Honolulu, Oahu,

I assent to the letter which you sent me. It affords me pleasure to see the works of other lands and things that are now. If I were there, I should very much desire to see. I have said to Kinau, make printing presses. My thought is ended. Love to you and Reynolds." (*Signed by the King.*)

A complete file of the Gazette, down to Jan. 14th, 1837, has come to hand; and the Repository will be sent "in exchange." As the editor requests that "foreign editors" will occasionally remark "on the existence of his humble journal," he ought, we think, to afford them more original matter, worthy of remark. We have been much disappointed in finding only here and there a fragment of intelligence respecting either the islands or their inhabitants. Many of the numbers, except the advertisements, might have been compiled as well in Liverpool or New York, as at Honolulu. A hint to the wise is enough. And there being at the islands material and talent sufficient to fill columns of the Gazette and Journal every week, we hope that a share of the space hitherto occupied with old extracts will be enlivened with descriptions of native scenery, productions, character, and manners.

In the Gazette for January 7th, the death of the princess Harieta Nahienaena, sister of the king, is noticed. She died at the palace of his majesty, Friday, December 30th, 1836.

A treaty, during the past year, has been formed between the United States and the government of the Sandwich Islands. The following articles, of agreement between Great Britain and the Sandwich Islands, signed at Honolulu, Oahu, Nov. 16th, 1836, we copy from the Gazette of the 19th of that month.

Art. I. English subjects shall be permitted to come with their vessels and property of whatever kind to the Sandwich Islands; they shall also be permitted to reside therein as long as they conform to the laws of these Islands, and to build houses and ware-houses for their merchandise, with the consent of the king; and good friendship shall continue between the subjects of both countries, Great Britain and the Sandwich Islands.

Art. II. English subjects resident at the Sandwich Islands are at liberty to go to their own country or elsewhere, either in their own or any other ves-

sels; they may dispose of their effects, enclosures, houses, &c., with the previous knowledge of the king, and take the value with them without any impediment whatever; the land, on which houses are built, is the property of the king, but the king shall have no authority to destroy the houses, or in any way injure the property of any British subject.

Art. III. When an English subject dies on the Sandwich Islands his effects shall not be searched or touched by any of the governors or chiefs, but shall be delivered into the hands of his executors or heirs if present, but if no heir or executor appear, the consul or his agent shall be executor for the same; if any debts were owing to the deceased, the governor of the place shall assist and do all in his power to compel the debtors to pay their debts to the heir or executor, or to the consul in case no heir or executor appears, and the consul is to inform the king of the death of every British subject leaving property on the Sandwich Islands.

(*Signed*) Tamehameha III.
Ed. Russell, capt. H. B. M's. ship, Acteon.

Art. VIII. *Journal of Occurrences. Trade in opium; delays in the post-establishment; the Yellow River; dismissal of officers; Chinese slave trade; arrival of six Japanese in Canton.*

Rumors and reports, respecting the question of legalizing the trade in opium, still continue to be contradictory and unsatisfactory. Just after the final pages of our last number went to press, on the 16th instant, a dispatch was received by the governor from Peking, acknowledging the receipt of his memorial (dated September 7th) on the 26th of January. The contents of the dispatch have not yet transpired, excepting an injunction on the governor and his colleagues to 'join heart and hand in restraining the avaricious greediness of foreigners, and in preventing the exportation of fine silver.'

Delay of Post. Our readers must not be surprised at this heading. The Chinese have not a *general* post-establishment, for the convenience of the public; but they have a well-organized establishment for the conveyance of governmental documents, throughout the empire; and we have recently observed in the Gazettes, complaints from several quarters, of the allotted period for conveyance of documents from one place to another being exceeded. For this offense, the magistrates in whose districts delay has arisen, are always subjected to a court of inquiry, and the immediate offenders, the couriers, are punished by the local officers. Post-stations are in general established at distances of from four to six or eight miles; and are supplied with horses for the use of the couriers, as also of officers of all ranks, who may be traveling on missions of importance, requiring expedition. This secondary use of the post-horses is sometimes taken advantage of by the relatives of subaltern officers, who, when the superiors of their official kinsmen are traveling on public business, attach themselves to their cortége, and thus travel from place to place, with merchandise, not only at a great saving of expence to themselves, but also in some measure free from examination at the custom-houses through which they pass. This has been carried to such an excess, that, according to a statement of one of the censors, the retinue of the last Cochinchinese mission, including the carriers of goods and of baggage, amounted to between 4000 and 5000 men. This statement has called forth an edict from the emperor, addressed to the governors and lieut.-governors of all the provinces, to put a stop to this illegal practice. His majesty also directs, that on the next visit of the Cochinchinese mission, which will be in the course of the current

year, the number of which their retinue is to consist is to be fixed before their journey from Kwangse to Peking is commenced.

The Yellow River. It appears from numerous cases of officers being rewarded, on several occasions in the course of last year, for their unremitting exertions, to restrain the Yellow River within its bounds, that the districts watered by it have receutly been exposed to very imminent danger of inundation. It has often been remarked that the Yellow River is one of his celestial majesty's most troublesome subjects. And it appears, that the emperor seek for more than human strength to keep it under control; and many temples to the river gods are endowed by government. A new one has lately been built, and his majesty was applied to for an inscription to place therein; in answer to which application, he promised to write one himself.

Dismissal. In a despotic government, the downfall from high favor to unqualified displeasure of their imperial masters is common among ministers. Yang Mingyang, late lieut.-governor of Shense, is the son of Yang Yuchun, who, in concert with the present premier Changling, acquired a high reputation and great favor from the war in Turkestan, against prince Jehángír, in 1826–28. He has held the government of Shense since 1831, and has borne a good reputation. He has, however, fallen under the imperial displeasure, and is suddenly dismissed from all official employment, on a charge of negligence, and partiality shown in the appointment to office of his fellow-townsmen.

Chinese slave trade The Canton Register of the 28th instant contains a letter, addressed to the editor, respecting the "slave trade on the coast of China." The letter is signed by a "Coaster," and seems to have been written since the Chinese new-year, February 5th, 1827. We qnote it entire.

"Dear Sir,—If the following facts are worth inserting in your columns, pray do so. On the 3d day of the first month, observed a small junk run close in shore and anchor. Shortly, after observed a great many people go down to the boats on the beach, and also two sedan chairs; thought it was some governmental officer going to embark. Having some of the natives on board the *barbarian* ship, we asked them what was going on, and who all those people were. They replied that two or three gentlemen were going to Formosa with slaves, which they had bought prior to the new year. About 150 woman and children, were embarked on board this small vessel, not exceeding 90 tons burthen. When they had all got on board, a barbarian officer (using the celestial term) went on board the junk to see how they were stowed away. The hold of the junk was divided into four parts; the aftermost was allotted to the gentlemen, and the other three parts to the women and children. Here they were, poor creatures! stowed very close; the greatest part of them being children from two years old and upwards, male and female; and several poor little urchins on deck, expose to the cold winds. The officer took the hatch off to put them below; there was not one that would lay hold of them, and the stench was so great that he was obliged to place them on deck again. The price of the children varied from twenty to fifty dollars each; that of the elder women from thirty to eighty. One stout young woman, about nineteen years old, was offered for sale; they asked fifty dollars for her; the officer made no purchase, hut let her take her chance in the new country. We asked some of the men how such a practice was allowed in such a country as theirs; the reply was: 'What can the poor people do who have no rice to give their children? It was much better to sell them for dollars than let them starve; and their parents want dollars for the new-year.' This abominable practice is carried on to a great extent. Slaves and free emigrants go over to Formosa from the Fuhkeën coast in hordes; the numbers are incredible. The Chinese will soon have the island entirely under their sway; there are several new settlements on the northeast and east side of Formosa. The natives give battle sometimes, but invariably are obliged to retreat." Your's &c.

Six Japanese arrived in Canton on the 12th instant, from Lingshwuy, one of the districts of Hainan, whether they had been driven, and their vessel wrecked, near the close of last year. From Canton they expect soon to go to Chapoo in the province of Chěkeäng, there to embark in a vessel for their own country. Chapoo is the only port, we believe, at which the Japanese are allowed to trade. It is in 30° 37′ N. lat.